

EXHIBIT AA

1

IN THE UNITED STATES DISTRICT COURT

FOR THE DISTRICT OF DELAWARE

THOMSON REUTERS ENTERPRISE
CENTRE GMBH and WEST
PUBLISHING CORPORATION,

Plaintiffs,

vs.

ROSS INTELLIGENCE, INC.,

Defendant.

Case Number:

Confidential Video Deposition of

LUTHER KARL BRANTING, Ph.D.

Wednesday, October 19, 2022

9:01 a.m.

Job No. 836111

Reported by: Laurie Donovan, RPR, CRR, CLR

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

A horizontal bar chart consisting of 20 black bars. The bars are arranged vertically, with the longest bar at the top and the shortest bar at the bottom. The lengths of the bars vary significantly, representing a distribution of data. The longest bar is nearly at the top of the chart, while the shortest bar is near the bottom. The bars are of uniform thickness and are set against a white background.

[illegible]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[illegible]

114

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

174

[REDACTED]

██████████

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Bar Index	Length (0-100)
1	100
2	40
3	100
4	60
5	100
6	90
7	80
8	70
9	90
10	60
11	40
12	100
13	50
14	100
15	90
16	90
17	100
18	10
19	50
20	90
21	100
22	100
23	100
24	100

25

183

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

184

186

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[illegible]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

A horizontal bar chart consisting of 20 rows. Each row contains a single black bar. The lengths of the bars vary significantly, representing a distribution of data. The bars are arranged in a single column, with each bar's length corresponding to a value on an implicit scale. The distribution shows a range from very short bars to bars that span most of the width of the chart area.

206

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

210

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

212

A horizontal bar chart consisting of 20 black bars. The bars are arranged vertically, with the longest bar at the top and the shortest at the bottom. The lengths of the bars vary significantly, representing a distribution of data. The bars are arranged in a single column, with the longest bar at the top and the shortest at the bottom. The lengths vary significantly, with some bars being nearly full-width and others being very short.

[illegible]

231

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

249

250

[REDACTED]

[REDACTED]

[REDACTED]

██████████

251

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

EXHIBIT AB

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

THOMSON REUTERS ENTERPRISE CENTRE	§	
GMBH and WEST PUBLISHING	§	
CORPORATION,	§	
Plaintiffs/Counterdefendants,	§	C.A. No. 20-613-SB
vs.	§	
ROSS INTELLIGENCE, INC.,	§	
Defendant/Counterclaimant,	§	

HIGHLY CONFIDENTIAL

PURSUANT TO PROTECTIVE ORDER

VIDEO-RECORDED ORAL DEPOSITION OF

CHRISTOPHER CAHN

AS CORPORATE REPRESENTATIVE OF

MORAE GLOBAL CORPORATION

Houston, Texas

Thursday, May 12, 2022

(REPORTED REMOTELY)

REPORTED BY:

Linda Russell, CSR

JOB NO: 210749

1

CAHN - MORAE GLOBAL

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

EXHIBIT AC

IN THE UNITED STATES DISTRICT COURT

FOR THE DISTRICT OF DELAWARE

C.A. No. 20-613(LPS)

IN RE MATTER OF:

THOMSON REUTERS ENTERPRISE

CENTRE GMBH and WEST PUBLISHING

CORPORATION,

Plaintiffs and Counterdefendants

-vs-

ROSS INTELLIGENCE INC.,

Defendant and Counterclaimant.

HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

REMOTE TESTIMONY OF ALAN COX

NOVEMBER 2, 2022 - 8:30 A.M. PDT

JOB NO. 2022-866214

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[illegible]

[REDACTED]

████████████████████

████████████████████

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

A horizontal bar chart consisting of 20 solid black bars. The bars are arranged vertically, with their lengths varying significantly. The longest bar is the 10th bar from the top, extending across the entire width of the chart area. The bars above and below it are progressively shorter, with the shortest bars being the 1st and 20th bars. The distribution is roughly bell-shaped, centered around the 10th bar. The bars are separated by small gaps, and there is a vertical line on the left side of the chart area.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

161

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

A horizontal bar chart consisting of 20 solid black bars. The bars are arranged vertically, one above the other. A thin vertical line is positioned to the left of the bars, acting as a baseline. The lengths of the bars vary significantly, representing different values. The bars are ordered from top to bottom as follows: 1. Short, 2. Long, 3. Long, 4. Long, 5. Long, 6. Long, 7. Medium, 8. Long, 9. Short, 10. Long, 11. Long, 12. Long, 13. Long, 14. Medium, 15. Long, 16. Long, 17. Long, 18. Long, 19. Medium, 20. Long.

A horizontal bar chart consisting of 20 black bars of varying lengths. The bars are arranged in a single column, with the longest bars in the middle and the shortest at the top and bottom. The lengths of the bars represent a distribution of data, with the longest bars reaching approximately 90% of the width and the shortest bars reaching approximately 10%.

180

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

183

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

A horizontal bar chart consisting of 20 solid black bars. The bars are arranged vertically, with their lengths varying significantly. The longest bars are located in the middle of the chart, while the shortest bars are at the top and bottom. The bars are separated by small gaps, and there is a vertical line on the left side of the chart.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

267

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

268

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

A horizontal bar chart consisting of 20 black bars of varying lengths. The bars are arranged in a single column, with the longest bars in the middle and the shortest at the top and bottom. The lengths of the bars represent a distribution of data, with the longest bars reaching approximately 90% of the width and the shortest bars reaching approximately 10%.

274

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

275

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

280

██████████

346

EXHIBIT AD

IN THE UNITED STATES DISTRICT COURT

FOR THE DISTRICT OF DELAWARE

THOMSON REUTERS ENTERPRISE)
CENTRE GMBH and WEST)
PUBLISHING CORPORATION,)

Plaintiffs,)

vs.)

ROSS INTELLIGENCE INC.,)

Defendant.)

No. 1:20-cv-00613-UNA

VIDEO-RECORDED DEPOSITION OF

BARBARA FREDERIKSEN-CROSS, at Regus Center,

1050 SW Sixth Avenue, Suite 1100, Portland,

Oregon, commencing at 9:21 a.m. PST, on

Friday, November 11, 2022, before

Marla Sharp, RPR, CLR, CCRR, CA CSR 11924,

OR CSR 17-0446, WA CSR 3408.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

EXHIBIT AE

HIGHLY CONFIDENTIAL
IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

IN RE MATTER OF:)
)
THOMSON REUTERS) C.A. No. 20-613(LPS)
ENTERPRISE CENTRE GMBH)
and WEST PUBLISHING)
CORPORATION,)
)
Plaintiffs and)
Counterdefendants,)
)
VS.)
)
ROSS INTELLIGENCE,)
INC.,)
)
Defendant and)
Counterclaimant.)
)

ORAL AND VIDEOTAPED DEPOSITION
OF
TARIQ HAFEEZ
MAY 26, 2022

EXHIBIT AF

1 IN THE UNITED STATES DISTRICT COURT

2 FOR THE DISTRICT OF DELAWARE

3 C.A. No. 20-613(LPS)

4

5 -----

6 IN RE MATTER OF:

7 THOMSON REUTERS ENTERPRISE

8 CENTRE GMBH and WEST PUBLISHING

9 CORPORATION,

10 Plaintiffs and Counterdefendants

11 -vs-

12 ROSS INTELLIGENCE INC.,

13 Defendant and Counterclaimant.

14 -----

15

16

17

18 HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY

19 REMOTE TESTIMONY OF RICHARD A. LEITER

20 October 24, 2022 - 11 A.M. CDT

21

22

23

24 JOB NO. 2022-866213

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

A horizontal bar chart consisting of 20 rows. Each row contains a single black bar of varying length. The bars are arranged in a single column, with each bar's length corresponding to a value on an implicit scale. The lengths of the bars vary significantly, with some being very short and others being nearly full-width. The bars are arranged in a single column, with each bar's length corresponding to a value on an implicit scale.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

131

A horizontal bar chart consisting of 20 black bars of varying lengths. The bars are arranged in a single column, with the longest bar in the middle and the shortest bars at the top and bottom. The bars represent a distribution of data, with the longest bar in the middle and the shortest bars at the top and bottom. The bars are arranged in a single column, with the longest bar in the middle and the shortest bars at the top and bottom. The bars represent a distribution of data, with the longest bar in the middle and the shortest bars at the top and bottom.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

A horizontal bar chart consisting of 20 rows. Each row contains a single black bar. The bars vary in length, representing a distribution of data. The bars are arranged in a single column, with each bar's length corresponding to a value on an implicit scale. The distribution shows a range of values, with some bars being significantly longer than others, indicating a non-uniform distribution.

A horizontal bar chart consisting of 20 black bars of varying lengths. The bars are arranged in a single column, with the longest bar in the middle and the shortest bars at the top and bottom. The bars represent a distribution of data, with the longest bar in the middle and the shortest bars at the top and bottom.

142

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

A horizontal bar chart consisting of 20 black bars of varying lengths. The bars are arranged in a single column, with the longest bar at the top and the shortest bar in the middle. The lengths of the bars vary significantly, with some being nearly full-width and others being very short.

162

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

A horizontal bar chart consisting of 20 black bars of varying lengths. The bars are arranged in a single column, with a vertical line on the left side. The lengths of the bars vary significantly, with some being very short and others being nearly full-width. The bars are arranged in a single column, with a vertical line on the left side. The lengths of the bars vary significantly, with some being very short and others being nearly full-width.

167

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

A horizontal bar chart consisting of 20 solid black bars. The bars are arranged vertically, with their lengths varying significantly. The longest bar is the 7th from the top, extending across the entire width of the chart area. The shortest bars are the 1st and 20th, which are very narrow. The distribution of lengths is roughly bell-shaped, with most bars concentrated in the middle of the stack. The bars are separated by small gaps, and there is a vertical line on the left side of the chart area.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[illegible]

[REDACTED]

[illegible]

[illegible]

--	--

[illegible]

[REDACTED]

[illegible][illegible]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

EXHIBIT AG

1 IN THE UNITED STATES DISTRICT COURT
2 FOR THE DISTRICT OF DELAWARE

4

6 CENTRE GMBH and WEST)

7 PUBLISHING CORPORATION,)

8 Plaintiffs and) C.A. No. 20-613

9 Counterdefendants) (LPS)

10 v.)

11 ROSS INTELLIGENCE, INC.,) HIGHLY CONFIDENTIAL

12 Defendant and)

13 Counterclaimant.)

14 _____)

15

16

17 --- This is the transcript of the videotaped
18 Deposition of, JIMOH OVBIAGELE, taken at the
19 offices of Regus - Toronto Airport Corporate
20 Centre, Mississauga, Ontario, Canada, on the
21 12th day of April, 2022.

22 -----

23

24 REPORTED BY: Helen Martineau, CSR

25 VIDEOGRAPHER: Bruno Silva

EXHIBIT AH

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

THOMSON REUTERS ENTERPRISE
CENTRE GMBH and WEST PUBLISHING
CORPORATION,

Plaintiffs,
v.

ROSS INTELLIGENCE INC.,
Defendant.

1:20-cv-00613-SB

**CONFIDENTIAL, HIGHLY
CONFIDENTIAL – ATTORNEYS’ EYES
ONLY**

**REPORT OF DEFENDANTS’ EXPERT
L. KARL BRANTING, J.D., Ph.D.**

I. INTRODUCTION 1

II. QUALIFICATIONS 1

III. CONFIDENTIALITY 3

IV. INFORMATION CONSIDERED 3

V. SUMMARY OF OPINIONS..... 4

VI. DETAILS OF HOW ROSS OBTAINED TRAINING DATA 7

VII. DETAILS OF THE ROSS SEARCH PLATFORM..... 13

**VIII. ROSS SELECTED ITS OWN FEATURES AND DEVELOPED ITS OWN
TRAINING AND SEARCH METHODOLOGIES THAT DIFFERED
FROM THOMSON REUTERS’ METHODOLOGIES..... 26**

IX. GLOSSARY 29

I. INTRODUCTION

1. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

2. [REDACTED]

[REDACTED]

[REDACTED]

II. QUALIFICATIONS

3. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

4. [REDACTED]

[REDACTED]

[REDACTED]

¹ See Exhibit 1 (Curriculum Vitae of L. Karl Branting).

² See *id.*

³ See *id.*

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

5. [REDACTED]

[REDACTED]

[REDACTED]

6. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

7. [REDACTED]

[REDACTED]

8. [REDACTED]

⁴ See Exhibit 2 (Branting, L. Karl. Reasoning with Rules and Precedents, SpringerLink, 2000).

⁵ See Exhibit 1.

⁶ See Exhibit 3 (Plaintiffs' Second Supplemental Response to ROSS' Interrogatory No. 1).

⁷ See Exhibit 4 (Sealed Order, signed by Judge Stephanos Bibas, dated July 25, 2022).

[REDACTED]

[REDACTED]

III. CONFIDENTIALITY

9. [REDACTED]

[REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

IV. INFORMATION CONSIDERED

10. [REDACTED]

[REDACTED]

[REDACTED]

11. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

12. [REDACTED]

[REDACTED]

⁸ See Exhibit 5 (Stipulated Protective Order, dated May 21, 2021 (ECF No. 48)).

V. SUMMARY OF OPINIONS

13. [REDACTED]

[REDACTED]

[REDACTED]

14. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

15. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

16. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

⁹ See e.g., Exhibit 8 (ROSS-003419433).

¹⁰ See e.g., Exhibit 9 (ROSS-003427517).

¹¹ See e.g., Exhibit 10 (ROSS-003419595).

¹² See e.g., Exhibit 11 (ROSS-000000001).

¹³ See e.g., Exhibit 12 (ROSS-000236085).

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

17. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

18. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

19. [REDACTED]

[REDACTED]

¹⁴ See *id.*; see also *e.g.*, Exhibit 13 (Morae Deposition Transcript, at 220:8-225:11).

¹⁵ See *e.g.*, Exhibit 7 [REDACTED].

¹⁶ See *e.g.*, *id.* [REDACTED].

[REDACTED].

¹⁸ See *e.g.*, Exhibit 7 ([REDACTED]).

¹⁹ See *id.*

[REDACTED].

[REDACTED]

20. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

21. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

²¹ [REDACTED]; *see also e.g.*, Exhibit 7 [REDACTED]
[REDACTED]

²² [REDACTED]; *see also* Exhibit 29 (ROSS-010244504), Exhibit 30 (ROSS-010248941).

²³ *See generally* Exhibit 7.

²⁴ *See id.*

²⁵ *See id.*

²⁶ *See id.*

²⁷ *See e.g.*, Exhibit 14 (ROSS-023018193); *see also* Exhibit 15 (Arruda Deposition Transcript, at 83:9-15).

[REDACTED]

22. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

VI. DETAILS OF HOW ROSS OBTAINED TRAINING DATA

23. [REDACTED]

[REDACTED]

[REDACTED]

24. [REDACTED]

[REDACTED]

[REDACTED]

25. [REDACTED]

[REDACTED]

[REDACTED]

26. [REDACTED]

[REDACTED]

²⁸ See Exhibit 7 ([REDACTED])

²⁹ Compare Exhibits 9-11 with Exhibit 16 (Moulinier Deposition Transcript, at 76:18-19, 78:1-4)).

³⁰ See e.g., Exhibit 11 (ROSS-000000001).

³¹ See e.g., *Id.*

[REDACTED]

27. [REDACTED]

[REDACTED]

28. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

29. [REDACTED]

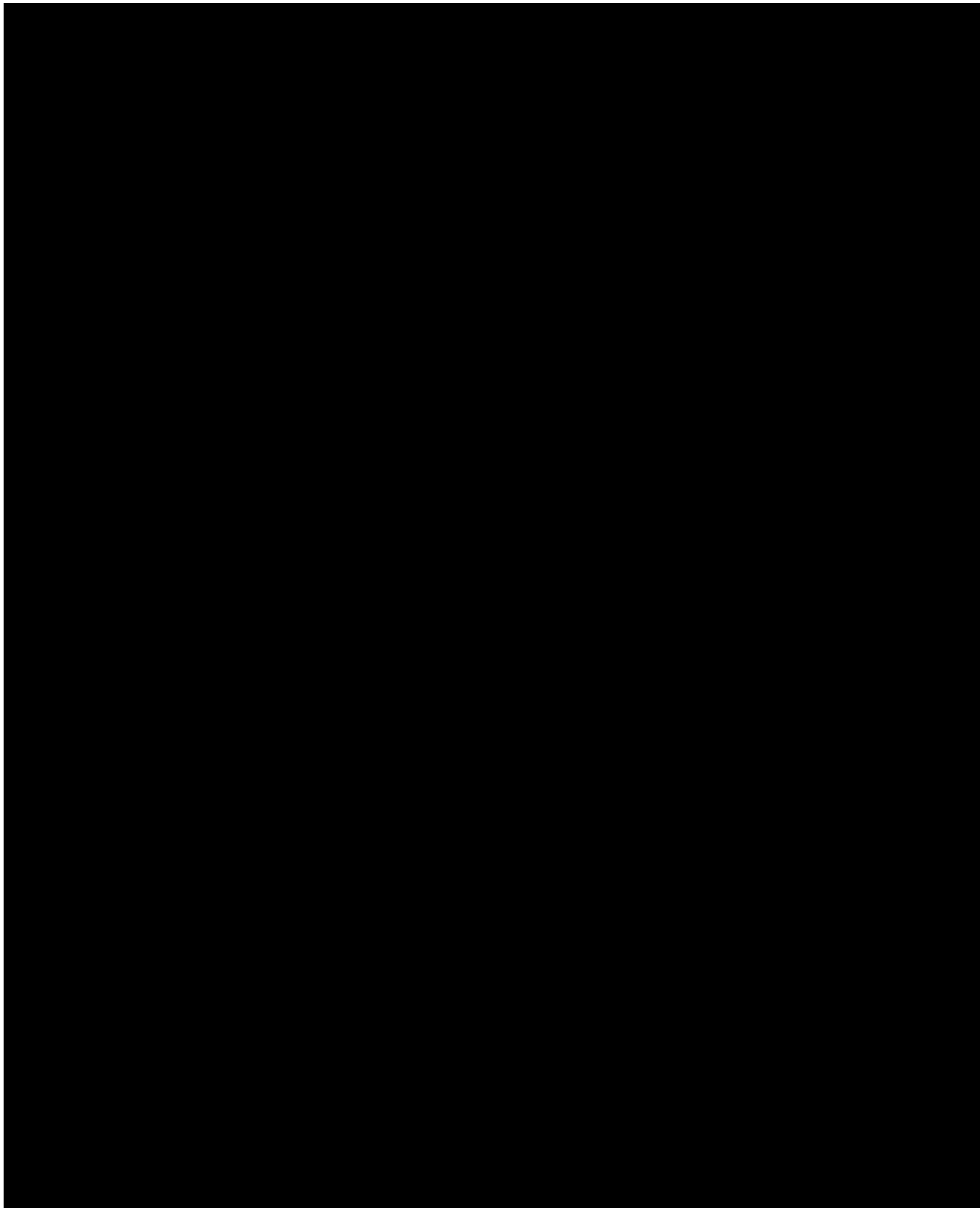
[REDACTED]

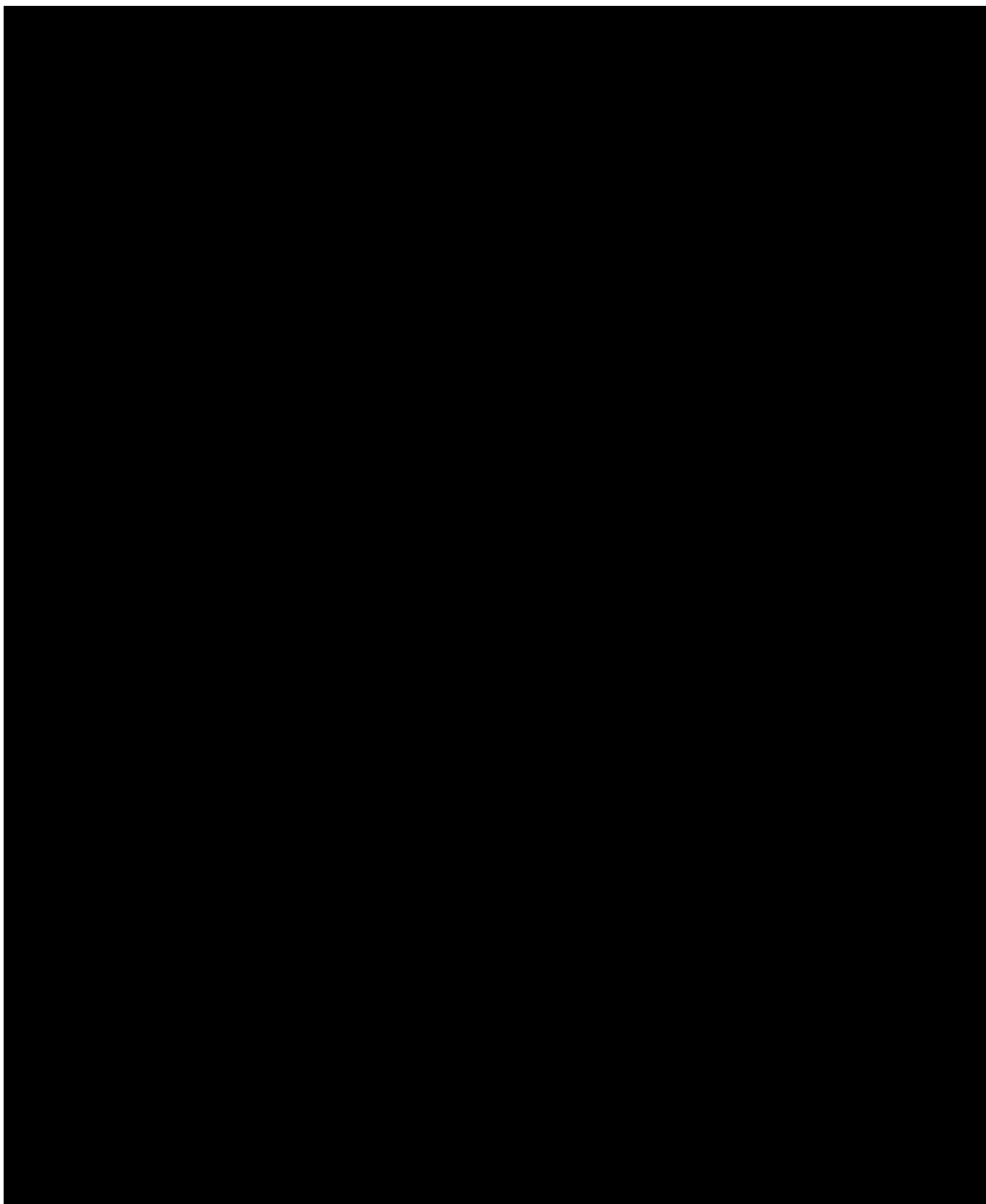
[REDACTED]

[REDACTED]

[REDACTED]

³² *See e.g., Id.*





[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

31. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

32. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

33. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

³³ See Exhibit 7 [REDACTED]

³⁴ [REDACTED]

[REDACTED]

³⁵ See Exhibit 7 [REDACTED]

[REDACTED] *id.* [REDACTED]

[REDACTED]; see *id.* [REDACTED]

[REDACTED]

³⁶ See *id.* [REDACTED]).

³⁷ See Exhibit 12 (ROSS-000236085).

[REDACTED]

[REDACTED]

[REDACTED]

34. [REDACTED]

[REDACTED]

[REDACTED]

35. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

36. [REDACTED]

[REDACTED]

[REDACTED]

³⁸ [REDACTED].

³⁹ As stated above, [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]. *See e.g.*, Exhibits 14, 15.

⁴⁰ See Exhibit 7 [REDACTED]

⁴¹ *See id.* [REDACTED]

[REDACTED]

⁴² *See id.* [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

37. [REDACTED]

[REDACTED]

[REDACTED]

38. [REDACTED]

[REDACTED]

VII. DETAILS OF THE ROSS SEARCH PLATFORM

39. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

40. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

41. [REDACTED]

⁴³ [REDACTED].

⁴⁴ *See id.* ([REDACTED])

⁴⁵ *See* Exhibit 17 (ROSS-009624376).

⁴⁶ *See* Exhibit 7 [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

42. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

43. [REDACTED]

[REDACTED]

[REDACTED]

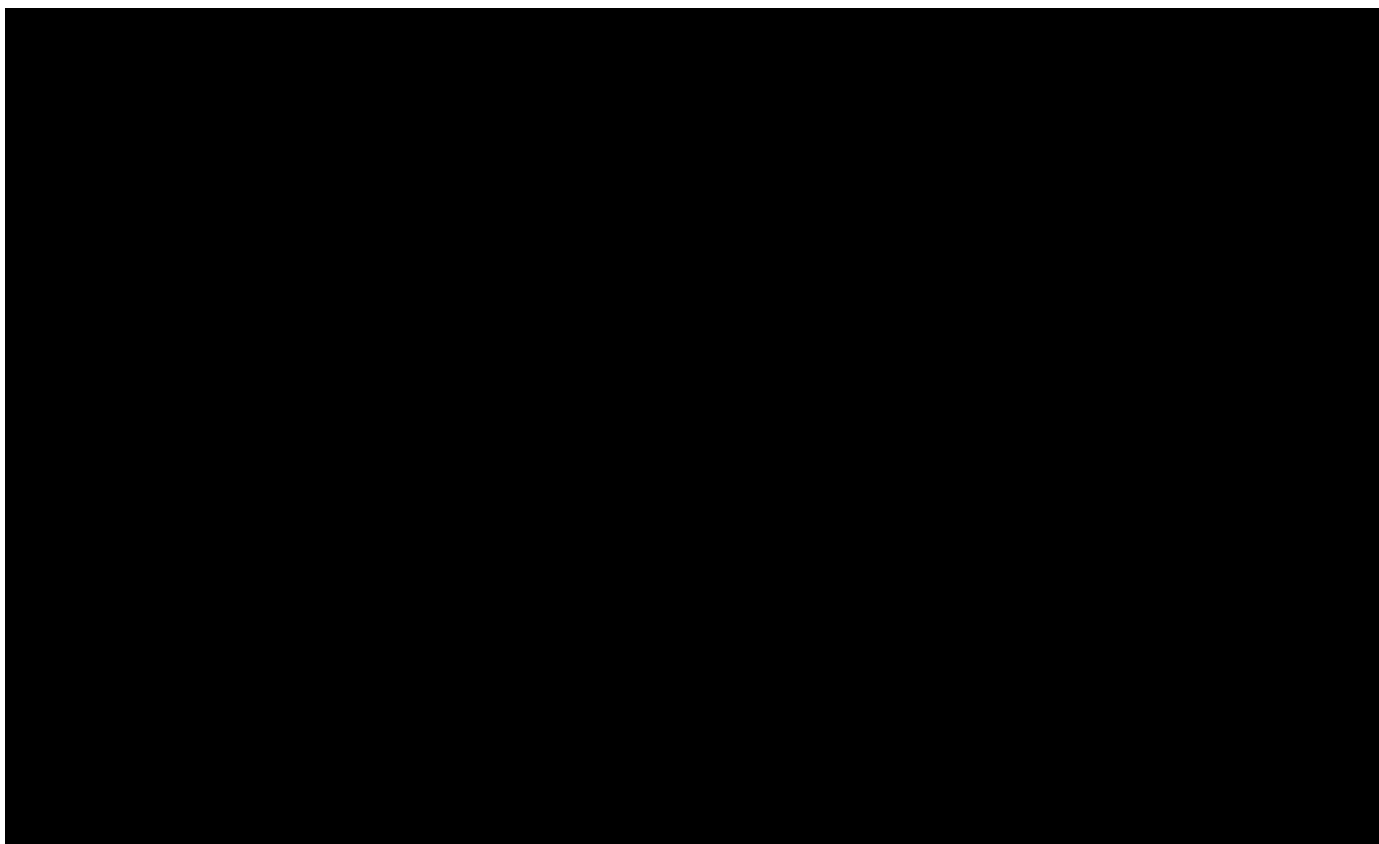
[REDACTED]

⁴⁷ See *id.* [REDACTED]
[REDACTED]
[REDACTED].

⁴⁸ See *id.*

⁴⁹ See *id.* [REDACTED]

⁵⁰ See *id.* [REDACTED]
[REDACTED]



44. [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED] [REDACTED]
[REDACTED]

45. [REDACTED]

[REDACTED] [REDACTED]
[REDACTED]
[REDACTED]

46. [REDACTED] [REDACTED]

⁵¹ See *id.* [REDACTED]

⁵² See *infra.*

⁵³ See Exhibit 7 [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

47. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

48. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

⁵⁴ See Exhibit 19 [REDACTED]

[REDACTED]

[REDACTED].

⁵⁵ See Exhibit 7 [REDACTED]

[REDACTED]

⁵⁶ See Glossary, *infra*.

[REDACTED]

49. [REDACTED]

50. [REDACTED]

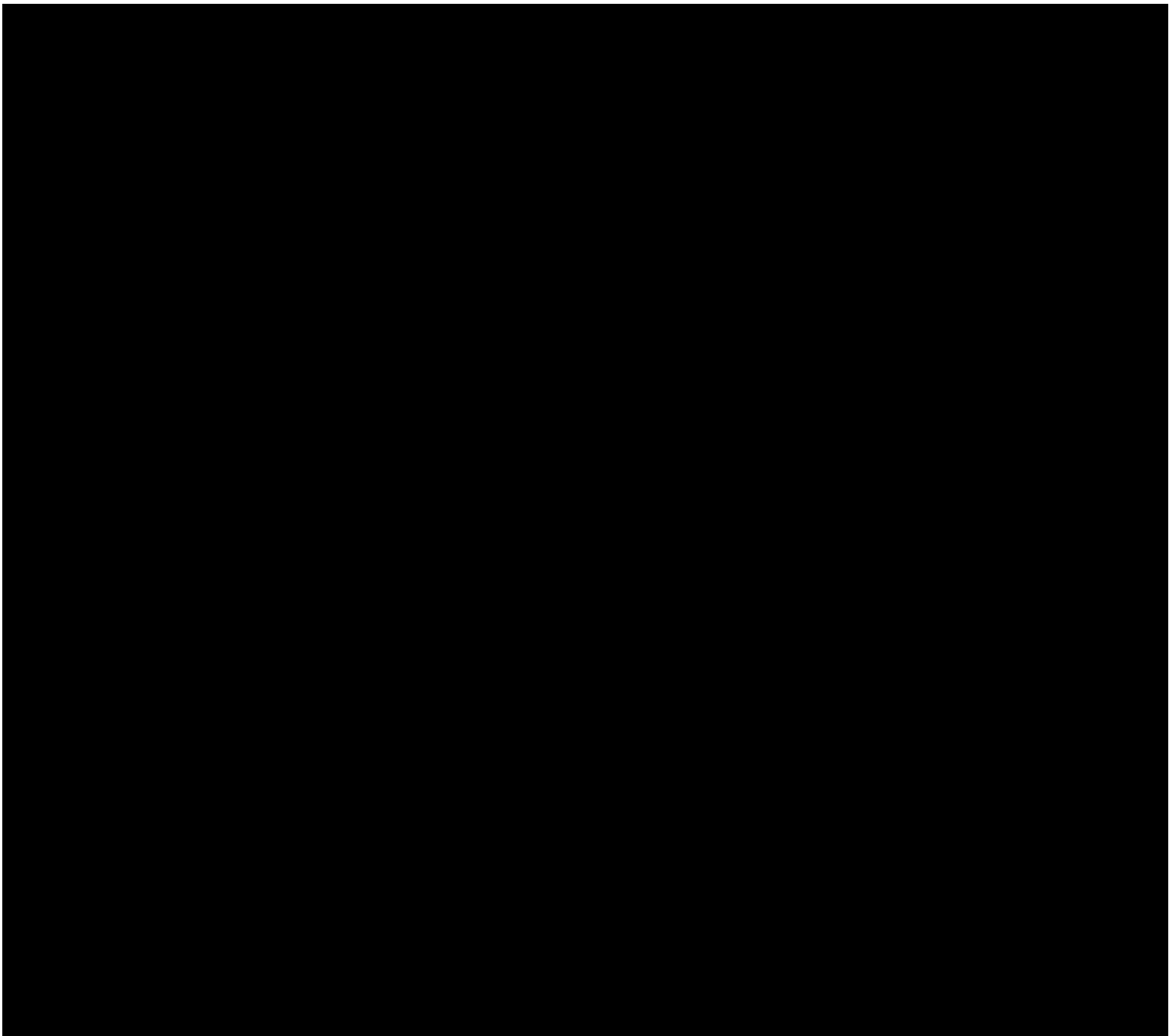
⁵⁷ *Id.*

⁵⁸ See Exhibit 7 [REDACTED]

⁵⁹ [REDACTED].

⁶⁰ [REDACTED].

⁶¹ In “features.py” the following features are found at lines: [REDACTED]

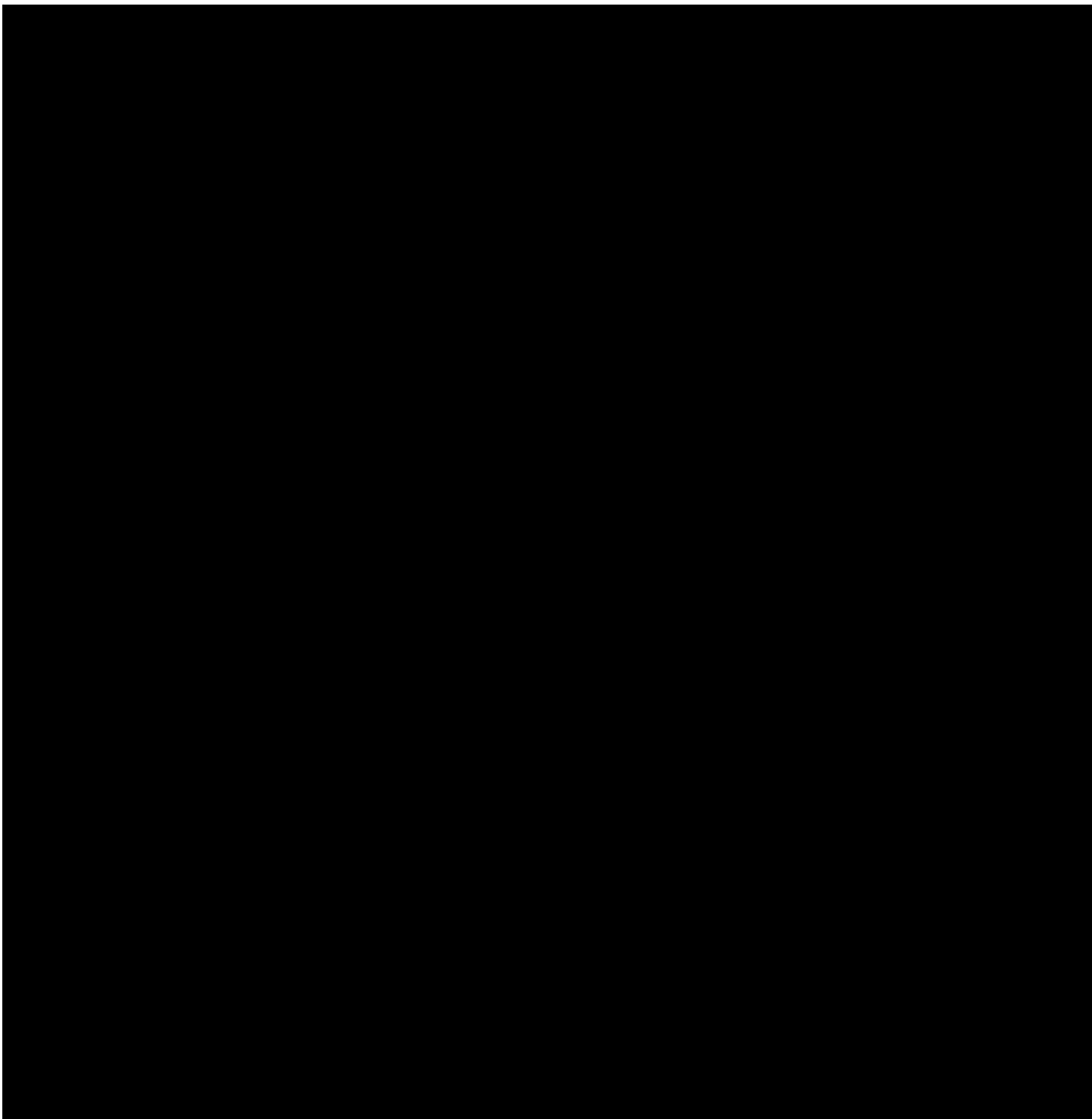


⁶² [REDACTED]

⁶³ *See* Exhibit 26 [REDACTED]
[REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED]
[REDACTED].

⁶⁴ [REDACTED]
[REDACTED].

⁶⁵ *See* Exhibit 20 [REDACTED]
[REDACTED]
[REDACTED].

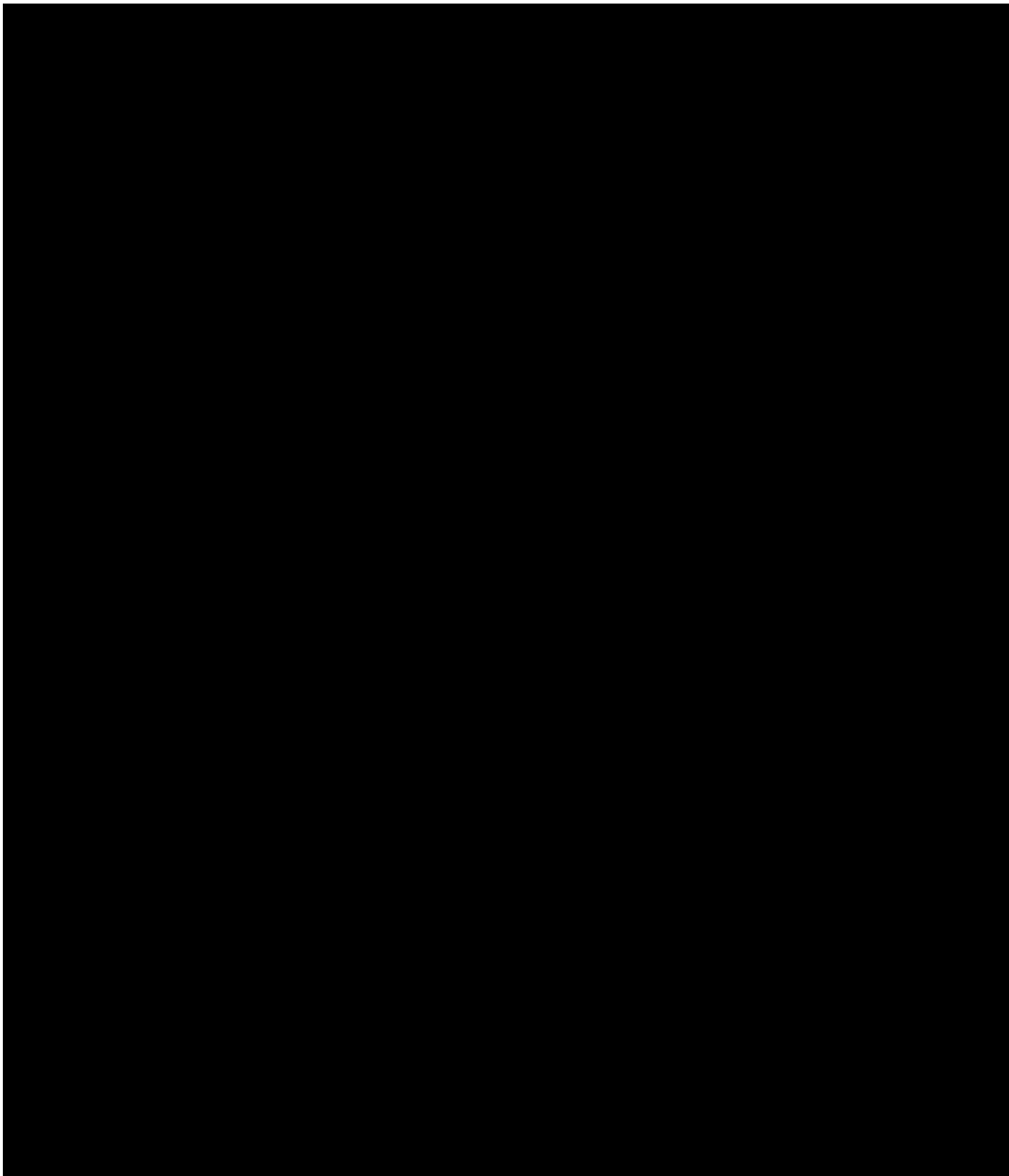


⁶⁶ See [REDACTED].

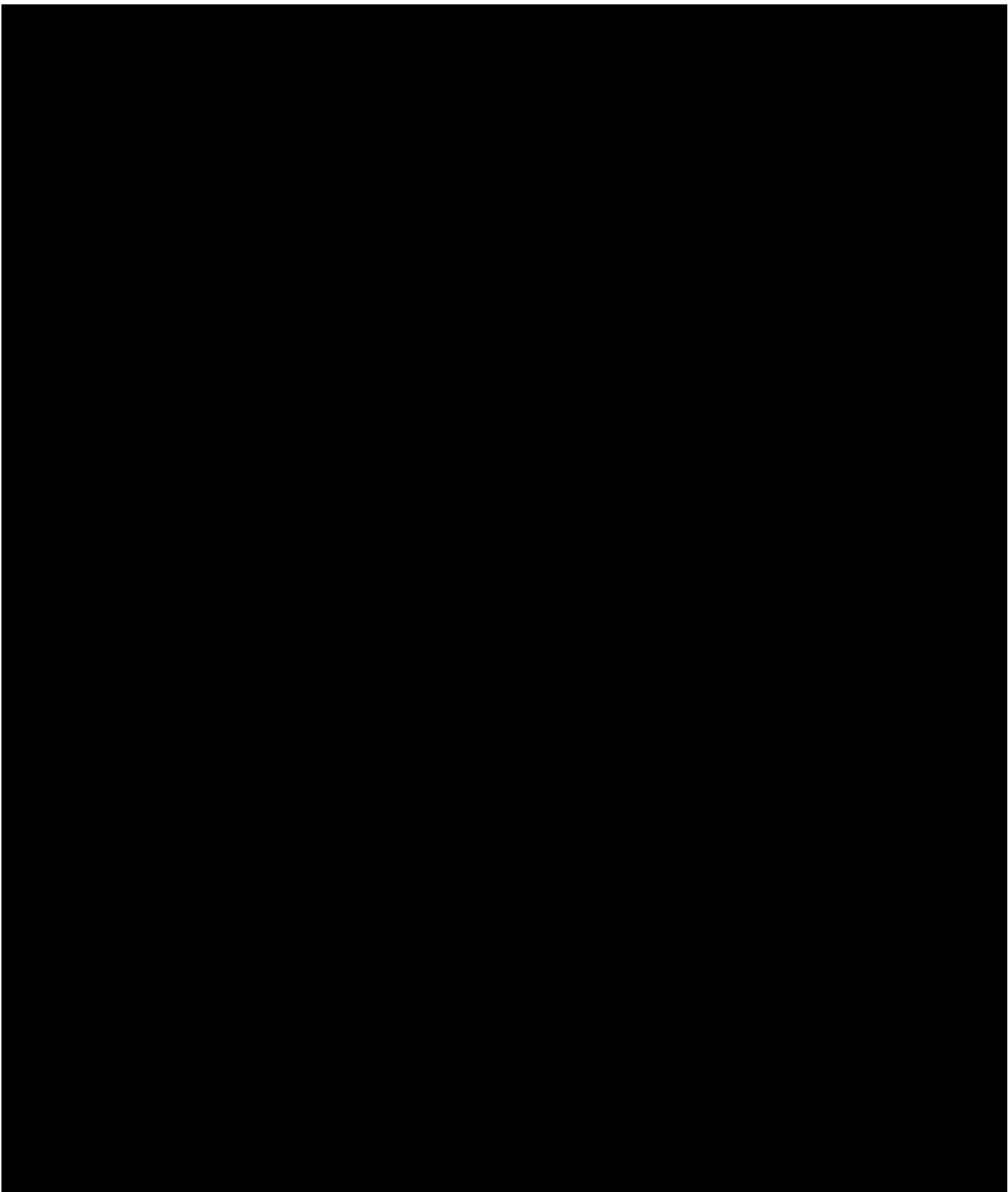
⁶⁷ See [REDACTED]
[REDACTED]
[REDACTED].

⁶⁸ See [REDACTED].

⁶⁹ See Exhibit 27 [REDACTED]
[REDACTED].



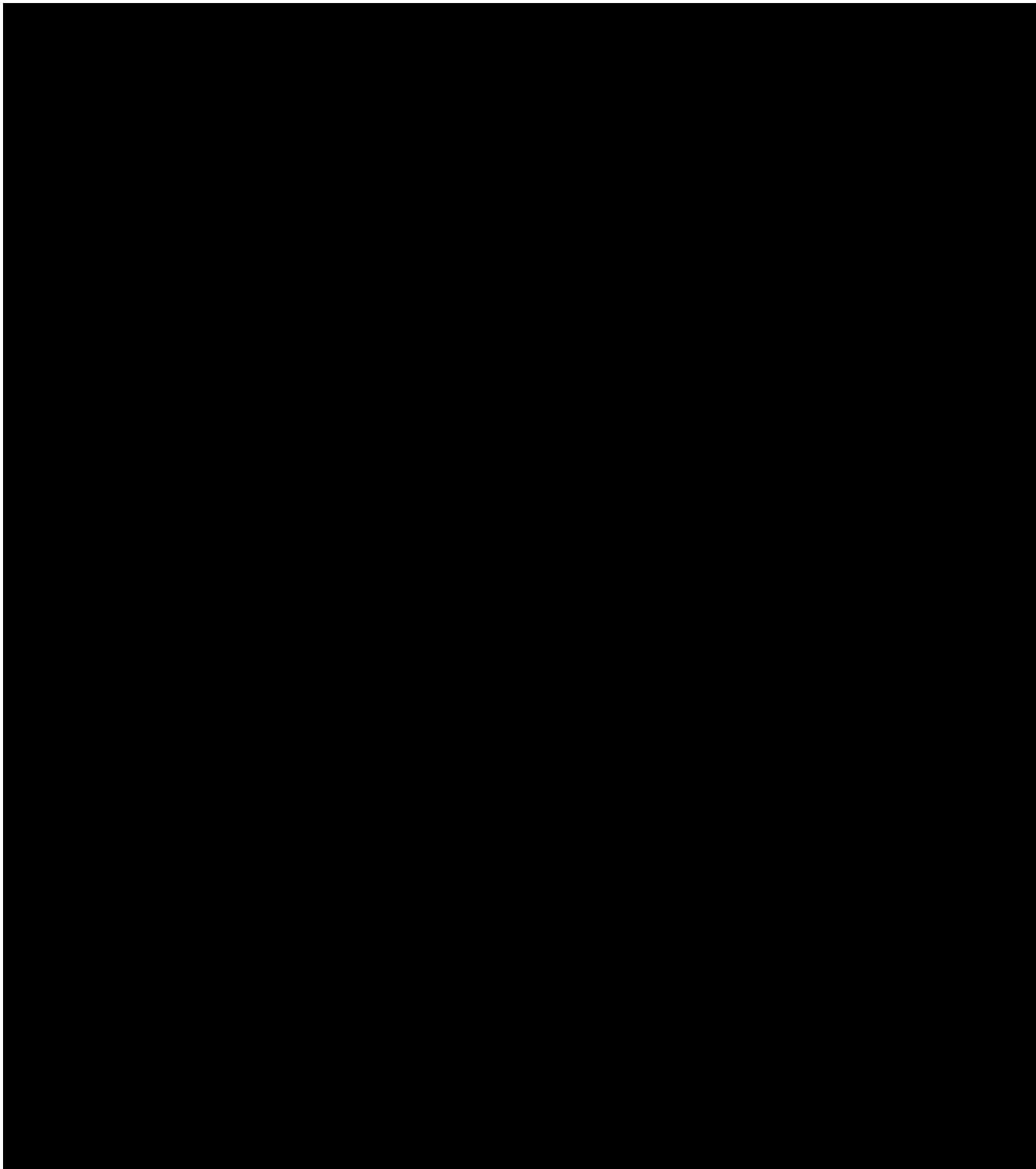
⁷⁰ See Exhibit 28 [REDACTED]
[REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED]
[REDACTED]
[REDACTED].



⁷¹ See Exhibit 7 [REDACTED]

⁷² See discussion of supervised vs. unsupervised learning, *infra*.

⁷³ See Exhibit 7 [REDACTED]



⁷⁴ See Exhibit 31 [REDACTED]
[REDACTED]
[REDACTED].

⁷⁵ See Exhibit 7 [REDACTED]

⁷⁶ See Exhibit 31, *supra* note 74.

[REDACTED]

51. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

⁷⁷ See Exhibit 32 [REDACTED]

[REDACTED]

[REDACTED].

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

52. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

53. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

54. [REDACTED]

[REDACTED]

⁷⁸ See Exhibit 19, *supra* note 54.

⁷⁹ See Exhibit 7; *see also* Exhibit 19, *supra* note 54 [REDACTED]

[REDACTED]

⁸⁰ See Exhibit 19, *supra* note 54.

⁸¹ See Exhibit 7 [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

55. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

56. [REDACTED]

[REDACTED]

⁸² See *id.* [REDACTED]
[REDACTED]; see Exhibit 7 [REDACTED]
[REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED]
[REDACTED]

⁸³ See Exhibit 19, *supra* note 54.

⁸⁴ *Id.*

⁸⁵ *Id.*

⁸⁶ Exhibit 7 [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

57. [REDACTED]

[REDACTED]

[REDACTED]

58. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

VIII. ROSS SELECTED ITS OWN FEATURES AND DEVELOPED ITS OWN TRAINING AND SEARCH METHODOLOGIES THAT DIFFERED FROM THOMSON REUTERS' METHODOLOGIES

59. [REDACTED]

[REDACTED]

[REDACTED]

⁸⁷ See Exhibit 21 (TR-0884952).

[REDACTED]

[REDACTED]

60. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

61. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

62. [REDACTED]

[REDACTED]

[REDACTED]

⁸⁸ See Exhibit 22 (TR-0908443).

⁸⁹ See Exhibit 23 (Al-Kofahi Deposition Transcript); Exhibit 24 (Moulinier Deposition Transcript).

⁹⁰ See generally Exhibit 23; Exhibit 24.

⁹¹ See e.g., Exhibit 12.

[REDACTED]

[REDACTED]

63. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

64. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED]

[REDACTED]

[REDACTED]

⁹² Compare ¶ 47, *supra*, with Exhibit 24 (Moulinier Deposition Transcript, at 136:9-137:17 [REDACTED]
[REDACTED]; *id.* 138:14-139:2 [REDACTED]
[REDACTED]

[REDACTED]

[REDACTED]

65. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

IX. [REDACTED]

66. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

67. [REDACTED]

68. [REDACTED]

[REDACTED]

69. [REDACTED]

⁹³ Compare ¶ 47, *supra*, with Exhibit 21 (TR-0884952).

⁹⁴ Compare ¶¶ 49-53, *supra*, with Exhibit 24 (Moulinier Deposition Transcript, at 63:3-11; 92:14-24).

[REDACTED]

[REDACTED]

70. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

71. [REDACTED]

[REDACTED]

[REDACTED]

⁹⁵ See, for example, this public website: [REDACTED].

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

72. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

73. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

74. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

75. [REDACTED]

[REDACTED]

[REDACTED]

76. [REDACTED]

[REDACTED]

[REDACTED]

77. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

⁹⁶ See Exhibit 25, [REDACTED].

[REDACTED]

[REDACTED]

78. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

79. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

80. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

81. [REDACTED]

[REDACTED]

82. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

⁹⁷ See Exhibit 33, [REDACTED]
[REDACTED]
[REDACTED].

83. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

84. [REDACTED]

[REDACTED]

85. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

86. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

87. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

88. [REDACTED]

[REDACTED]

89. [REDACTED]

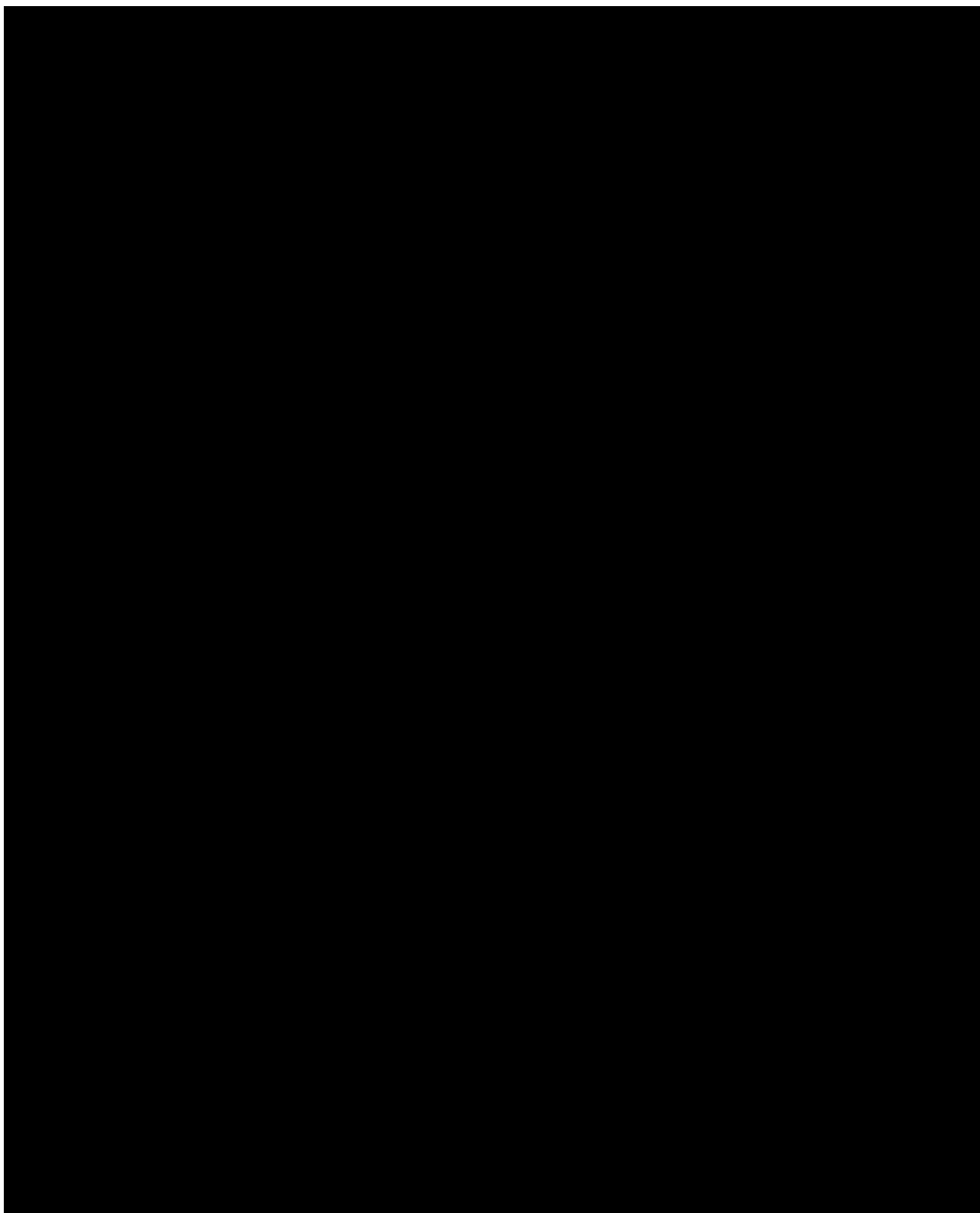
[REDACTED]

90. [REDACTED]

[REDACTED]

[REDACTED]

⁹⁸ See Exhibit 7 [REDACTED]



Luther Karl Branting
28 July 2022

38

BRANTING EXPERT REPORT

CASE 1:20-cv-00613-SB

EXHIBIT AI

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

THOMSON REUTERS ENTERPRISE
CENTRE GMBH and WEST PUBLISHING
CORPORATION,

Plaintiffs,
v.

ROSS INTELLIGENCE INC.,
Defendant.

1:20-cv-00613-SB

**CONFIDENTIAL, HIGHLY
CONFIDENTIAL – ATTORNEYS’ EYES
ONLY**

**REBUTTAL OF KREIN EXPERT WITNESS REPORT
L. KARL BRANTING, J.D., Ph.D.**

I. INTRODUCTION.....1

II. INFORMATION CONSIDERED1

III. SUMMARY OF OPINIONS.....2

IV. DETAILED REBUTTAL OF THE KREIN REPORT3

I. INTRODUCTION

1. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

2. [REDACTED]

[REDACTED]

[REDACTED]

II. INFORMATION CONSIDERED

3. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

III. SUMMARY OF OPINIONS

4.

[REDACTED]

5.

[REDACTED]

6.

[REDACTED]

7.

[REDACTED]

8.

[REDACTED]

[REDACTED]

9. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

10. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

IV. DETAILED REBUTTAL OF THE KREIN REPORT

11. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

12. [REDACTED]

[REDACTED]

[REDACTED]

¹ See generally Branting Report Ex. 7.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

13.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

² [REDACTED]
(Moulinier Deposition Transcript, at 63:3-11; 92:14-24),
(Branting Expert Report ¶¶ 49-53), [REDACTED]
[REDACTED]” (Moulinier Deposition Transcript, at
72:3 [REDACTED] (*Id.* at 78:18).
[REDACTED] (Correspondence with Jimoh Obviagele, May 27, 2022).

³ [REDACTED] Krein Report ¶ 74.

⁴ Ovbiagele Deposition at 181:15, 181:22-182:9.

⁵ Krein Report ¶ 6.

[REDACTED]

[REDACTED] Krein Report ¶ 52, n. 23.

[REDACTED]

14.

[REDACTED]

15.

[REDACTED]

⁶ See e.g., Branting Report ¶¶ 19, 57.

⁷ Krein Report, ¶ 2.

⁸ See Frederickson-Cross Report ¶ 20

[REDACTED].*Id.*

⁹ See e.g., Branting Report ¶¶ 50-51.

16.

[REDACTED]

17.

[REDACTED]

18.

[REDACTED]

¹⁰ Krein Report, ¶¶ 103-114, 143-149.

¹¹ Third Supplemental Response to Interrogatory No. 1, pp. 69-71.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

19. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

20. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

21. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

¹² See e.g., Branting Report ¶ 19.

¹³ See e.g., *id.*

¹⁴ Krein Report ¶ 148.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

22. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

23. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

15 [REDACTED]

¹⁶ Krein Report ¶ 135.

[REDACTED]

A. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

B. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

C. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

24. [REDACTED]

[REDACTED]

¹⁷ [REDACTED]

¹⁸ Krein Report paragraph 113.

[REDACTED]

25. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

26. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

27. [REDACTED]

[REDACTED]

[REDACTED]

¹⁹ Krein Report ¶ 146.

²⁰ Ovbiagele Depo. at 131:8-10, 16-17; 132:5, 13-15; 133:5-6.

²¹ See Branting Report ¶¶ 27-29.

²² ROSS-000076307 [REDACTED]

²³ LEGALEASE-00108391 [REDACTED]

[REDACTED]

28. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

29. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

30. [REDACTED]

[REDACTED]

²⁴ Ovbiagele Depo. at 131:8-10, 16-17; 132:5, 13-15; 133:5-6.

²⁵ Krein Report, ¶ 114.

²⁶ See e.g., Krein Report, p. 1 of Appendix C.

²⁷ *Id.*

²⁸ ROSS-000076307 ([REDACTED]) Obviagele Depo. 132:13-15

²⁹ Whitehead Depo. 101:1-10, 107:6-108:9.

³⁰ Krein Report ¶ 103. See also Krein Report ¶ 74

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] [REDACTED]

[REDACTED] [REDACTED]

[REDACTED]

[REDACTED] [REDACTED] [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

³¹ Krein Report ¶ 142.

32

Moulinier Deposition Transcript, at 62:14; 92:23-24, 86:12-13.

³³ Artificial Intelligence Index Report, 2021, <https://aiindex.stanford.edu/wp-content/uploads/2021/03/2021-AI-Index-Report-Chapter-1.pdf>, pg. 4.

³⁴ Public Access to NSF-Funded Research, https://www.nsf.gov/news/special_reports/public_access/.

³⁵ <https://ai.google/about/>.

³⁶ <https://allenai.org/>.

³⁷ <https://www.amazon.science/>.

³⁸ The Stanford Law School CodeX Techindex, <https://techindex.law.stanford.edu/>.

[REDACTED] commitment to older

31. [REDACTED]

32. [REDACTED]

[REDACTED]

Luther Karl Branting
1 September 2022

³⁹ Krein report ¶ 149.

⁴⁰ Branting Report ¶ 50.

EXHIBIT AJ

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

THOMSON REUTERS ENTERPRISE
CENTRE GMBH and WEST PUBLISHING
CORPORATION,

Plaintiffs,
v.

ROSS INTELLIGENCE INC.,
Defendant.

1:20-cv-00613-SB

**CONFIDENTIAL, HIGHLY
CONFIDENTIAL – ATTORNEYS’ EYES
ONLY**

**REPLY TO KREIN REBUTTAL REPORT
L. KARL BRANTING, J.D., Ph.D.**

I. INTRODUCTION1

II. INFORMATION CONSIDERED1

III. SUMMARY OF OPINIONS2

IV. DETAILED REPLY TO THE KREIN REBUTTAL REPORT.....3

I. Introduction

1. [REDACTED]

[REDACTED]

2. [REDACTED]

[REDACTED]

II. Information Considered

3. [REDACTED]

[REDACTED]

4. [REDACTED]

[REDACTED]

III. Summary of Opinions

5. [REDACTED]

[REDACTED]

6. [REDACTED]

[REDACTED]

7. [REDACTED]

[REDACTED]

8. [REDACTED]

[REDACTED]

¹ Krein Rebuttal Report ¶ 40.
² Krein Rebuttal Report ¶¶ 29-32.
³ Krein Rebuttal Report Section 4.4.

IV. Detailed Reply to the Krein Rebuttal Report

9.

[REDACTED]

10.

[REDACTED]

[REDACTED]

⁴ Krein Rebuttal Report ¶ 40.

11. [REDACTED]

12. [REDACTED]

⁵ Branting Report ¶¶ 49-52.

⁶ See Exhibit A (deeputil-master/deeputil/features.py); See also Branting Report, Exhibit 7, Branting Report ¶ 50.

[REDACTED]

13. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

14. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

15. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

16. [REDACTED]

[REDACTED]

[REDACTED]

⁷ See Exhibit A (deeputil-master/deeputil/features.py) lines 792-797, [REDACTED]

[REDACTED].

⁸ Ibid.

[REDACTED]

17. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

18. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

9 [REDACTED]

10 See Branting Report, ¶ 79, for a description of unsupervised machine learning.

11 Branting Report, Exhibit 7 [REDACTED]

[REDACTED]

12 See Exhibit A ([REDACTED])

[REDACTED]

19.

[REDACTED]

20.

[REDACTED]

[REDACTED]

¹³ Krein Rebuttal Report footnote 44.

[REDACTED]

[REDACTED]

21. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

22. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

23. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]

14 [REDACTED]

[REDACTED]

[REDACTED]

24. [REDACTED]

[REDACTED]

[REDACTED]

25. [REDACTED]

[REDACTED]

15 [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

26. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

27. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

16 [REDACTED]

[REDACTED]

[REDACTED]

¹⁷ See Branting Report, ¶ 49 n. 61.

¹⁸ Krein Rebuttal Report ¶¶ 29-32.

[REDACTED]

28. [REDACTED]

19 [REDACTED]

[REDACTED]

21 [REDACTED]

22 Krein Rebuttal Report Section 4.4.

[REDACTED]

29.

[REDACTED]

30.

[REDACTED]

[REDACTED]

-
- ²³ Frederiksen-Cross Report ¶ 20.
²⁴ Krein Rebuttal Report ¶ 44.
²⁵ See, e.g., Branting Report ¶¶ 59-65.
²⁶ Branting Report ¶ 22.
²⁷ Krein Rebuttal Report ¶ 16.
²⁸ See Branting Report, ¶ 19

Luther Karl Branting
October 10, 2022

EXHIBIT AK

CONFIDENTIAL – ATTORNEYS’ EYES ONLY

**EXPERT REPORT
OF
ALAN J. COX, PH.D.**

In Connection with

*Thomson Reuters Enterprise Centre GmbH and West Publishing Corporation, v. ROSS
Intelligence Inc.*

Case No. 20-613-SB

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

August 1, 2022

CONFIDENTIAL—ATTORNEYS’ EYES ONLY

NATIONAL ECONOMIC RESEARCH ASSOCIATES

FOUR EMBARCADERO CENTER, SUITE 400
SAN FRANCISCO, CA 94111

TELEPHONE: 415.291.1000 FACSIMILE: 415.291.1020

TABLE OF CONTENTS

i

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

APPENDIX A. Resume of Alan J. Cox

APPENDIX B. Documents Reviewed

I. QUALIFICATIONS

1. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[illegible]

3. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[illegible]

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

5. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

6. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

7. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

8. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

9. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

[REDACTED]

10. [REDACTED]
[REDACTED]
[REDACTED]

11. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

12. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

II. CONFIDENTIALITY

13. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

¹ Plaintiffs and Counterdefendants Thomson Reuters Enterprise Centre GmbH and West Publishing Corporation’s Second Supplemental Response and Objections to Defendant and Counterclaimant ROSS Intelligence Inc.’s Interrogatory No. 1 (herein, “Second Supplemental Response to Interrogatory No. 1”.) [REDACTED]

² Sealed Order, signed by Judge Stephanos Bibas, dated July 25, 2022.

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

[REDACTED]

III. ASSIGNMENT

14. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

15. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

16. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

³ Plaintiffs and Counterdefendants Thomson Reuters Enterprise Centre GmbH and West Publishing Corporation’s Complaint (herein, “Complaint”), p. 11.

⁴ TR-0179838.

⁵ TR-0179885. Available at <https://www.youtube.com/watch?v=mX2WrYzigRc&list=PLC3F45184A96D112E&index=1> (accessed March 23, 2022.) The video describes the creation of headnotes for the US Supreme Court’s decision in *District of Columbia v. Heller*, on June 26, 2008. The video states that headnotes are composed by West employees.

⁶ TR-0179830; TR-0179838; TR-0179843. See also, TR-0044730; TR-0526552.

⁷ 17 U.S.C. § 107.

⁸ [REDACTED].

⁹ 17 U.S.C. § 107(4).

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

[REDACTED]

17. [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]

IV. SUMMARY OF OPINIONS

18. [REDACTED]
- [REDACTED]

I [REDACTED]

[REDACTED]

I [REDACTED]

[REDACTED]

[REDACTED]

I [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

I [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

I [REDACTED]

[REDACTED]

[REDACTED]

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

[REDACTED]

- [REDACTED]

- [REDACTED]

- [REDACTED]

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

- [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
- [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

V. FACTS AND DATA CONSIDERED IN FORMING MY OPINIONS

19. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

VI. THE PARTIES

A. WEST PUBLISHING CORPORATION AND THOMSON REUTERS ENTERPRISE CENTRE GMBH

20. [REDACTED]
[REDACTED]

¹⁰ Complaint, p. 3.

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

[REDACTED]

21. [REDACTED]

B. ROSS INTELLIGENCE, INC.

22. [REDACTED]

¹¹ Exhibit 16 (Foster, Lynn, and Bruce Kennedy. "Technological Developments in Legal Research." J. App. Prac. & Process 2 (2000): 275, p. 277.)

¹² Exhibit 1 (Ambrogi, Robert, "Westlaw's Days Are Numbered," <https://www.lawnext.com/2015/05/westlaws-days-are-numbered.html> (accessed July 1, 2022).) Although Westlaw was originally created by West Publishing, it was based on the software behind QUIC/LAW, which was a Canadian legal research tool that operated from 1968 to 1973.

¹³ *Id.*

¹⁴ Exhibit 2 (Company History, <https://www.thomsonreuters.com/en/about-us/company-history.html> (accessed June 27, 2022)). See also Exhibit 3 (New York Times, "West Publishing Purchase By Thomson Is Approved," <https://www.nytimes.com/1996/06/20/business/the-media-business-west-publishing-purchase-by-thomson-is-approved.html> (Accessed July 1, 2022)).

¹⁵ Exhibit 4 (Thomson Reuters, 2021 Annual Report, p. 8, <https://ir.thomsonreuters.com/static-files/6938b043-b0c4-453f-842a-90ac19b5febd> (accessed June 27, 2022)).

¹⁶ Exhibit 5 (Thomson Reuters 2021 Fact Book, available at <https://ir.thomsonreuters.com/financial-information/fact-book> (accessed July 24, 2022)).

¹⁷ Complaint, p. 3.

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

[REDACTED]

VII. CASE BACKGROUND

A. PLAINTIFFS’ ALLEGATIONS

23. [REDACTED]

24. [REDACTED]

¹⁸ Exhibit 6 (ROSS Intelligence, “Our Company,” <https://www.rossintelligence.com/about-us> (accessed July 1, 2022)).

¹⁹ Exhibit 7 (ROSS Intelligence, How is Natural Language Search Changing The Face of Legal Research?,” <https://blog.rossintelligence.com/post/how-natural-language-search-changing-face-of-legal-research> (accessed July 5, 2022)).

²⁰ Exhibit 8 (ROSS Intelligence, “ROSS Intelligence Secures \$13 Million to Transform Legal Industry,” <https://blog.rossintelligence.com/post/ross-intelligence-secures-13-million> (accessed July 5, 2022)).

²¹ *Id.*

²² Exhibit 9 (ROSS Intelligence, “Announcement,” <https://blog.rossintelligence.com/post/announcement> (accessed July 1, 2022)).

²³ Compliant, pp. 1-3.

²⁴ *Id.*, pp. 3-8.

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

25. [REDACTED]

B. [REDACTED]

26. [REDACTED]

²⁵ Complaint, p. 12 (“Upon information and belief, ROSS paid LegalEase to copy the Westlaw Content from Westlaw to build ROSS’s competing platform.”)

²⁶ *Id.* See also Plaintiffs and Counterdefendants Thomson Reuters Enterprise Centre GmbH and West Publishing Corporation’s Second Supplemental Responses and Objections to Defendant and Counterclaimant ROSS Intelligence Inc.’s Interrogatory No. 21 (herein “Second Supplemental Response to Interrogatory No. 21”), p. 21.

²⁷ Second Supplemental Response to Interrogatory No. 1.

²⁸ TR-0179830; TR-0179838; TR-0179843; TR-0044730; TR-0526552. See also Exhibit 10 (Stanford Law School, “West Key Number System,” <https://guides.law.stanford.edu/cases/keynumbersystem> (accessed July 22, 2022)); Exhibit 11 (University of Arizona, “West Key Number System,” <https://libguides.library.arizona.edu/c.php?g=847161&p=6793295#s-lg-box-21620967> (accessed July 22, 2022)).

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

[REDACTED]

27. [REDACTED]

²⁹ *Id.*

³⁰ *Id.*

³¹ *Id.* In particular, TR-0179830 at 5.

³² *Id.*

³³ *Id.*

³⁴ *Id.*

³⁵ *Id.* In particular, TR-0526552 at 620.

³⁶ *Id.* See also TR-0179884. Available at <https://www.youtube.com/watch?v=MqKKnOSlZxg> (accessed March 23, 2022.) (“We make it easy to find what you need...” using headnotes and other features.)

³⁷ Second Supplemental Response to Interrogatory No. 1; TR-0179838; Complaint, pp. 3-6. See also TR-0734270.

³⁸ *Id.*

³⁹ *Id.*

⁴⁰ TR-0179838.

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

[REDACTED]

28. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

29. [REDACTED]

[REDACTED]

⁴¹ Plaintiffs and Counterdefendants Thomson Reuters Enterprise Centre GmbH and West Publishing Corporation’s Responses and Objections to Defendant and Counterclaimant ROSS Intelligence Inc.’s First Set of Requests for Admission (Nos. 1-129), pp 33, 34 ([REDACTED]).

⁴² Second Supplemental Response to Interrogatory No. 1.

⁴³ Second Supplemental Response to Interrogatory No. 21. [REDACTED]

[REDACTED]

⁴⁴ *Id.*

⁴⁵ *Id.* Citing TR-0179887; TR-0179889; TR-0179885; TR-0179877; TR-0179884; TR-0179863; TR-0179838; TR-0179876; TR-0179830; TR-0179867; TR-0179843.

⁴⁶ TR-0179830.

⁴⁷ TR-0179843 at 4.

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

[REDACTED]

30. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

31. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED] [REDACTED]

32. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

33. [REDACTED]

⁴⁸ Deposition of Isabelle Moulinier 30(b)(6) Representative for Plaintiffs West Publishing Corporation and Thomson Reuters Enterprise Centre GmbH, pp. 103-104.

⁴⁹ This analogy also applies to Home Depot’s brick-and-mortar stores, where aisles are allocated to hold categories of product and different sections of the aisles are divided into more and more specialized.

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

[REDACTED]

34. [REDACTED]

35. [REDACTED]

36. [REDACTED]

⁵⁰ Exhibit 17 (Merriam-Webster, “artificial intelligence,” <https://www.merriam-webster.com/dictionary/artificial%20intelligence> (accessed June 24, 2022)).

⁵¹ Exhibit 18 (IBM, “Artificial Intelligence (AI),” <https://www.ibm.com/cloud/learn/what-is-artificial-intelligence> (accessed June 24, 2022)).

⁵² Report of Defendants’ Expert L. Karl Branting, J.D., Ph.D. (herein, “Branting Report”), ¶ 14.

⁵³ Exhibit 12 (Lemley, Mark A., and Bryan Casey. "Fair learning." Tex. L. Rev. 99 (2020): 743).

⁵⁴ *Id.*

⁵⁵ For example, see Exhibit 13 (ScienceDaily, “Use artificial intelligence to identify, count, describe wild animals.” www.sciencedaily.com/releases/2018/06/180605124148.htm (accessed July 25, 2022)). Paper describes the use of 32 million labelled photographs to feed into an ML program.

⁵⁶ Branting Report, ¶¶ 23-29.

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

[REDACTED]

37. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

38. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

⁵⁷ Discussion with Dr. L Karl Branting, dated July 6, 2022.

⁵⁸ Branting Report, ¶¶ 39-58; Discussion with Dr. L Karl Branting and Jimoh Ovbiagele, dated July 18, 2022.

⁵⁹ *Id.* Legal research AI might also be able to receive natural language questions and then, as an output, produce a rank-ordered list of statutes, regulations, and other law.

⁶⁰ Branting Report, ¶¶ 23-28.

⁶¹ *Id.*

⁶² *Id.* In particular, ¶ 29.

⁶³ *Id.*, ¶ 26 [REDACTED]

⁶⁴ *Id.* ¶¶ 39-58.

⁶⁵ Branting Report, ¶¶ 13-20, 39-52, 83.

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

[REDACTED]

39. [REDACTED]

40. [REDACTED]

⁶⁶ *Id.* ¶¶ 53-58.

⁶⁷ *Id.* ¶¶ 39-43, 58.

⁶⁸ *Id.* ¶¶ 14, 58.

⁶⁹ ROSS-003332368.

⁷⁰ Deposition of Teri Whitehead, pp. 33-34, 37; ROSS-003332368.

⁷¹ Deposition of Christopher Cahn, 30(b)(6) Representative for Morae Deposition Transcript, pp. 220-225; Branting Report, ¶ 16.

⁷² For example, ROSS-000000001.

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

[REDACTED]

41. [REDACTED]

⁷³ Deposition of Teri Whitehead, pp. 33-34.

⁷⁴ Branting Report, ¶¶ 23-38.

⁷⁵ *Id.*

⁷⁶ *Id.* ¶ 19.

⁷⁷ *Id.* ¶¶ 39-58.

⁷⁸ *Id.*, ¶¶ 39-91.

⁷⁹ *Id.*, ¶¶ 39-43.

⁸⁰ *Id.* ¶¶ 44-46.

⁸¹ *Id.* ¶¶ 47-52 ([REDACTED]).

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

VIII. FAIR USE

A. INTRODUCTION

42. [REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

43. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

44. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

⁸² 17 U.S.C. § 107.

⁸³ Second Supplemental Response to Interrogatory No. 1.

⁸⁴ The characteristics of products and how they are used are important determinants on the demand for the products and how customers will divide themselves up into different segments.

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

45. [REDACTED]
[REDACTED]
[REDACTED].

46. [REDACTED]
[REDACTED] [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

47. [REDACTED]
[REDACTED] [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED] [REDACTED]
[REDACTED] [REDACTED]
[REDACTED]
[REDACTED] [REDACTED]
[REDACTED]

[REDACTED]

⁸⁵ Branting Report, ¶ 20.

⁸⁶ For example, TR-0179830; TR-0179843.

⁸⁷ Branting Report, ¶¶ 59-65.

⁸⁸ *Id.*

⁸⁹ *Id.*

⁹⁰ *Id.*

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

[REDACTED]

48. [REDACTED]

[REDACTED]

49. [REDACTED]

1. [REDACTED]

50. [REDACTED]

⁹¹ *Id.*

⁹² Exhibit 5, p. 38; Exhibit 19 (Thomson Reuters, “Start Fall with Westlaw,” <https://lawschool.thomsonreuters.com/> (accessed July 31, 2022)).

⁹³ Exhibit 20 (Sloan, Amy E. (2021) Basic Legal Research: Tools and Strategies, Eighth Edition. Wolters Kluwer. Chapter 2. Understanding Search Options, Section B. Source-Driven Search Process); Exhibit 14 (YouTube, “Topic and Key Number Searching on Westlaw,” <https://www.youtube.com/watch?v=LM8BuBIED0o> (accessed July 27, 2022)).

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

[REDACTED]

51. [REDACTED]

2. [REDACTED]

52. [REDACTED]

⁹⁴ My use of the terms “searching by word” “or searching by keyword” includes using strategies term connectors as described in Exhibit 15 (Westlaw Quick Reference Guide, “Searching with Terms and Connectors: Retrieving Documents on Westlaw,” <https://law.lclark.edu/live/files/9394-westlaw-terms-and-connectors-searching> (accessed July 27, 2022)).

⁹⁵ Exhibit 20; Exhibit 14; TR-0179838.

⁹⁶ *Id.*

⁹⁷ *Id.*

⁹⁸ *Id.* See also TR-0179830.

⁹⁹ *Id.*

¹⁰⁰ *Id.*

¹⁰¹ *Id.*

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

[REDACTED]

3. [REDACTED]

53. [REDACTED]

¹⁰² TR-0179830 at 5-7.

¹⁰³ Exhibit 20; Exhibit 14; TR-0179838; TR-0179830.

¹⁰⁴ *Id.*

¹⁰⁵ *Id.*

¹⁰⁶ *Id.*

¹⁰⁷ TR-0179838. I provided the more precise number based on the RFA response. See *infra* n. 41. See also TR-0179876. Available at <https://www.youtube.com/watch?v=NiOXTn4iDT4> (accessed July 12, 2022).

¹⁰⁸ Exhibit 21 (“Editorial Enhancements,” <https://legal.thomsonreuters.com/en/products/westlaw/editorial-enhancements> (accessed July 31, 2022)) (“Save time with Headnotes: . . . Rather than reading through every case in your results list to determine whether it’s applicable to your specific issue, you can easily pinpoint the cases that match your facts and desired outcome to build the strongest argument. . . Ensure you haven’t missed any relevant authority”). [REDACTED]

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

[REDACTED]

54. [REDACTED]

55. [REDACTED]

56. [REDACTED]

57. [REDACTED]

¹⁰⁹ *Id.* See also TR-0179838, which describes the key numbers as “comprehensive.”

¹¹⁰ I understand that at least some of the time this is true. By contrast, [REDACTED]
[REDACTED]. See TR-0036336.

¹¹¹ Exhibit 22 (Thomson Reuters, “Westlaw: Our people. Your peace of mind,” <https://store.legal.thomsonreuters.com/law-products/westlaw-legal-research/q-and-a-with-robin-germandt-key-number-system> (accessed June 26, 2022)). A YouTube video Q&A with Robin Gernandt is embedded into this link.

¹¹² Exhibit 16, pp. 277-279). The article discusses the establishment of the key number system by the beginning of the 20th century.

¹¹³ TR-0179830.

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

[REDACTED]

58. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

59. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

60. [REDACTED]
[REDACTED] [REDACTED]
[REDACTED] [REDACTED]
[REDACTED]
[REDACTED] [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

¹¹⁴ See generally Branting Report.

¹¹⁵ *Id.*

¹¹⁶ *Id.* ¶¶ 39-58.

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

[REDACTED]

[REDACTED]

61. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

62. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

63. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

¹¹⁷ *Id.* ¶¶ 59-65; TR-0037669 [REDACTED]

¹¹⁸ Branting Report, ¶ 61.

¹¹⁹ Branting Report, ¶¶ 59-65; TR-0037669.

¹²⁰ *Id.*

¹²¹ *Id.*

¹²² Branting Report, ¶¶ 59-65.

¹²³ *Id.*

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

[REDACTED]

64. [REDACTED]

[REDACTED]

65. [REDACTED]

¹²⁴ *Id.*, ¶¶ 60, 63.

¹²⁵ *Id.*, ¶¶ 59-65.

¹²⁶ *Id.*, ¶ 64.

¹²⁷ *Id.* ¶¶ 64 ([REDACTED])

¹²⁸ Branting Report, ¶¶ 59-65; TR-0037669.

¹²⁹ TR-0037669.

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

[REDACTED]

66. [REDACTED]

67. [REDACTED]

¹³⁰ *Id.*

¹³¹ TR-0179843 at 4.

¹³² Branting Report, ¶¶ 39-65.

¹³³ *Id.*

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

[REDACTED]

68. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

69. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

70. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

71. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

72. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

D. [REDACTED]

73. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

¹³⁴ *Id.* See also Second Supplemental Response to Interrogatory No. 21, p. 21.

¹³⁵ See *supra* n. 41 ([REDACTED])
[REDACTED]

¹³⁶ Exhibit 21.

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

[REDACTED]

74. [REDACTED]

75. [REDACTED]

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

[REDACTED]

76. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

77. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

¹³⁷ *Ty, Inc. v. Publications International Ltd.* 292 F.3d 512, 517 (7th Cir. 2002). Exhibit 24 (Landes, William M., and Richard A. Posner. *The economic structure of intellectual property law*. Harvard university press, 2003. pp. 115-123).

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

[REDACTED]

78. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

79. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

IX. [REDACTED]

A. [REDACTED]

80. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

¹³⁸ Though, in reality, the value of its information depreciates with time.

¹³⁹ Google’s use of Java API’s, by contrast, results in every user of an Android phone using the copyrighted APIs at issue in *Oracle v. Google*. Furthermore, developers of Apps that are compatible with Android will use those same APIs. Exhibit 25 (Bell, Abraham, and Gideon Parchomovsky. "Propertizing fair use." *Va. L. Rev.* 107 (2021): 1255). Available at https://scholarship.law.upenn.edu/faculty_scholarship/2250.

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

[REDACTED]

81. [REDACTED]

82. [REDACTED]

83. [REDACTED]

84. [REDACTED]

¹⁴⁰ TR-0037669; TR-0179843; Exhibit 21.

¹⁴¹ Exhibit 26 (Thomson Reuters, “Product: Westlaw Edge,” <https://legal.thomsonreuters.com/en/products/westlaw-edge> (accessed May 1, 2022)). Quote is transcribed from video embedded in this page.

¹⁴² TR-0179838.

¹⁴³ Complaint, p. 6.

¹⁴⁴ The collection of materials that I considered are cited in Appendix B.

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

[REDACTED]

B. [REDACTED]

85. [REDACTED]

¹⁴⁵ Discussion with Dr. L Karl Branting and Jimoh Ovbiagele, dated July 18, 2022.

¹⁴⁶ *Id.*

¹⁴⁷ [REDACTED]

¹⁴⁸ For example, the Second Supplemental Response to Interrogatory No. 1 describes [REDACTED]

¹⁴⁹ Deposition of Isabelle Moulinier 30(b)(6) Representative for Plaintiffs West Publishing Corporation and Thomson Reuters Enterprise Centre GmbH, pp. 103-104.

¹⁵⁰ Second Supplemental Response to Interrogatory No. 21, p. 18 [REDACTED]
[REDACTED] See also Plaintiffs / Counterdefendants’ Answer

[illegible]

87.

A horizontal bar chart consisting of ten solid black bars stacked vertically. The bars vary in length, with the second bar from the top being the longest and the tenth bar being the shortest.

Bar Index	Relative Length (%)
1	95
2	100
3	98
4	90
5	95
6	98
7	95
8	100
9	98
10	85

88. [REDACTED]

[REDACTED]

[REDACTED]

(same); ¶ 105 (same).

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

[REDACTED]

89. [REDACTED]

90. [REDACTED]

¹⁵¹ Exhibit 16, p. 282.

¹⁵² Exhibit 23 (Hellyer, Paul. "Assessing the influence of computer-assisted legal research: a study of California Supreme Court opinions." Law Libr. J. 97 (2005): 285) ("As LexisNexis and Westlaw improved, their popularity grew exponentially. By 1990, LexisNexis was processing 100,000 online searches in one day; by 1998, that number grew to 600,000. By 2000, LexisNexis had 11,400 databases and 2.1 million subscribers worldwide and was adding 8.7 million documents every week. By 1994, nearly all major law firms in the United States had access to Lexis and Westlaw.") (Citations excluded).

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

[REDACTED]

91.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

92.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

153

[REDACTED]

¹⁵⁴ Exhibit 23.

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

[REDACTED]

93. [REDACTED]

94. [REDACTED]

95. [REDACTED]

¹⁵⁵ Branting Report, ¶ 65.

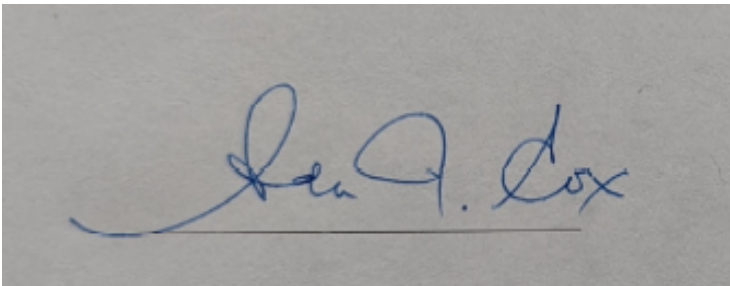
¹⁵⁶ *Id.* ¶¶ 39-65.

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

[REDACTED]

C. [REDACTED]

96. [REDACTED]



Alan J. Cox

¹⁵⁷ *Google LLC v. Oracle Am., Inc.*, 141 S. Ct. 1183, 1195 (2021) (“Copyright and patents, the Constitution says, are to “promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries.” Art. I, § 8, cl. 8. Copyright statutes and case law have made clear that copyright has practical objectives. It grants an author an exclusive right to produce his work (sometimes for a hundred years or more), not as a special reward, but in order to encourage the production of works that others might reproduce more cheaply.”)

Alan J. Cox
Independent Economic Consultant

Education

University of California, Berkeley

Ph.D., Business Administration, Economic Analysis and Policy Program, 1989

Major Fields: Industrial Organization, Finance, Econometrics

University of British Columbia

M.A., Economics, 1978

York University, Toronto

B.S., Environmental Science, 1976

Professional Experience

2020	Independent Economic Consultant Affiliated Consultant, NERA Economic Consulting
	NERA Economic Consulting
2020-	Outside Consultant
2016-2018	Chair of NERA's Global Intellectual Property Practice
2001-2019	Managing Director/Senior Vice President
1998-2001	Vice President
1994-1998	Senior Consultant
1988-1989	Senior Analyst
	Law & Economics Consulting Group, Inc.
1989-1994	Vice President and Senior Economist
	University of California, Berkeley
1983-1989	Research Assistant

1985-1987	Minimax Research Corporation Economist
1978-1981	Massachusetts Institute of Technology Visiting Economist
1978	University of British Columbia Research Associate

Teaching Experience

1994-1995	St. Mary's College of California Visiting Lecturer, Graduate School of Management Taught Industrial Structure and Competitive Strategy.
1989	Northeastern University Adjunct Lecturer, Graduate School of Management Taught Managerial Economics.
1984-1985	University of California, Berkeley Teaching Assistant Taught Intermediate Microeconomics.

Expert Testimony, Affidavits, and Reports

(Clients underlined)

Antitrust

Vicky Maldonado, et al. v. Apple Inc., et al., U.S.D.C. for the Northern District of California, San Francisco Division Case No. 3:16-cv-04067-WHO

Deposition on April 15, 2019, *Declaration and Expert Report in Support of Defendants' Opposition to Class Certification* dated April 8, 2019 on behalf of Apple Inc., AppleCare Service Company, Inc. and Apple CSC Inc. in rebuttal to Plaintiffs' Economic Expert report on class certification related to Apple service plans for iPhones and iPads in the U.S.

In Re Korean Ramen Antitrust Litigation, U.S. District Court for the Northern District of California, San Francisco Division, Case No. 3:13-cv-04115-WHO

Trial testimony on December 12-13, 2018, *Deposition* on September 27, 2017, *Reply Expert Report* dated August 18, 2017, *Supplemental Expert Report* dated July 21, 2017, *Reply Declaration* dated November 2, 2016, *Deposition testimony* on October 7, 2016 and *Declaration* of Alan J. Cox dated August 24, 2016 on behalf of Defendants Nongshim Co., Ltd., Nongshim America, Inc., Ottogi Co. Ltd and Ottogi America, Inc. responding in opposition to Motions by Direct Purchaser Plaintiffs and Indirect Purchaser Plaintiffs for Class Certification relating to the sales of Korean ramen products in the United States by Defendants.

Trendsettah USA, Inc. and Trend Settah, Inc. v. Swisher International, Inc., USDC Case No. 8:14-CV-01664-JDS

Trial Testimony March 24 and 29, 2016, *Supplemental Expert Report* dated December 18, 2015, *Deposition* on December 17, 2015 and *Expert Report* dated December 11, 2015 on behalf of defendant Swisher International, Inc. evaluating economic issues related to defendant's alleged anticompetitive conduct and alleged breach of contract.

Intellectual Property

SinCo Technologies Pte, Ltd. v. SinCo Electronics, (Dongguan) Co., Ltd.; XingKe Electronics (Dongguan) Co., Ltd; XingKe Electronics Technology Co., Ltd.; Sincoo Electronics Technology Co., Ltd.; Mui Lang Tjoa (An Individual); Ng Cher Yong Aka Cy Ng (An Individual); And Liew Yew Soon Aka Mark Liew (An Individual) U.S.D.C. for the Northern District of California, Case No. 3:17CV5517 EMC

Expert Report, January 9, 2020 on the economic consequences of defendants' trademark misuse and the appropriate methods for calculating the allowed remedies. *Supplemental Expert Report*, October 1, 2021 commenting late submitted data. *Trial testimony*, November 10 and 12, 2021.

FOX Factory, Inc., v. SRAM, LLC, and Sandleford Limited, U.S.D.C. for the District of Colorado Case Nos. 1:18-cv-00127-WJM-NYW and 1:18-cv-00130-WJM-NYW, Filed: October 11, 2017.

Rebuttal Report dated January 25, 2019 on behalf of defendants, SRAM, LLC and Sandleford Limited regarding purported reasonable royalty damages experienced by FOX, if any, from the alleged patent infringements by defendants.

TC Technology LLC v. Sprint Corporation and Sprint Spectrum, L.P., USDC for the District of Delaware Case No. 1:16-cv-00153-UNA, Filed: March 10, 2016.

Deposition November 20, 2018, *Expert Rebuttal Report* dated October 22, 2018 regarding economic issues regarding purported reasonable royalty damages.

ZF Micro Devices, Inc., et al. v. TAT Capital Partners, LTD., etc., et al, Santa Clara County Superior Court Case No. 1-09-CV 134970, Filed: February 17, 2009.

Deposition on September 14, 2018 on behalf of TAT Capital Partners, LTD regarding damages due to breach of fiduciary duty and conspiracy related to tortious activities.

Thomas Davidson, et al. v. Apple, Inc., U.S.D.C. for the Northern District of California Case No. 5:16-cv-4942-LHK, Filed: August 27, 2016.

Deposition on May 9, 2019, *Expert Rebuttal Report* dated February 15, 2019, *Declaration in Support of Defendant's Opposition to Amended Motion for Class Certification* dated December 6, 2018, *Declaration in Support of Defendant's Opposition to Motion for Class Certification* dated February 9, 2018, on behalf of defendant, Apple Inc. related to economic issues and sale of Apple smartphones in the U.S.

Amgen Inc. and Amgen Manufacturing Limited v. Sandoz Inc., Sandoz International GMBH, Sandoz GMBH, and LEK Pharmaceuticals D.D., USDC for the Northern District of California, San Francisco Division, Case 3:16-cv-02581, Filed: May 12, 2016.

Deposition on October 6, 2017, *Supplemental Expert Report* dated October 2, 2017 and *Expert Report* dated July 28, 2017 regarding lost profits and reasonable royalty damages for alleged patent infringements by Sandoz defendants.

C.R. Bard, Inc. and Bard Peripheral Vascular, Inc. v. AngioDynamics, Inc., U.S.D.C. for the District of Delaware, Case No. 1:15-cv-00218-SLR-SRF, Filed: March 10, 2015

Trial testimony March 6-7, 2019, *Deposition* dated December 13, 2017, *Reply to Supplemental Expert Report* dated December 6, 2017, *Reply Expert Report* dated December 1, 2017, *Expert Report* dated September 1, 2017 on behalf of C.R. Bard, Inc. and Bard Peripheral Vascular, Inc. (“Bard”) regarding reasonable royalties and lost profits damages experienced by Bard as a result of alleged patent infringements by AngioDynamics, Inc.

The Regents of the University of California and Becton, Dickinson and Company v. Affymetrix, Inc. and Life Technologies Corp., U.S. District Court for the Southern District of California Case No. 3:17-cv-01394-H-NLS.

Deposition dated February 27, 2019, *Expert Report* dated December 7, 2018 regarding the need for a permanent injunction, lost profits damages, and reasonable royalty damages for the alleged patent infringement by Defendants, *Deposition* on September 22, 2017, *Declaration* in Support of Plaintiff, Becton, Dickinson and Company’s Motion for Preliminary Injunction to enjoin sales of allegedly infringing brilliant polymers used in flow cytometry, dated July 12, 2017.

EON Corp. IP Holdings, LLC v. Apple Inc., USDC for the Northern District of California, San Francisco Division Case No. 3:14-CV-05511-WHO

Expert Report dated March 15, 2017 on behalf of Defendant, Apple Inc., regarding reasonable royalty damages experienced by EON Corp. as a result of an alleged patent infringement by Apple Inc.

In the Matter of: Certain Network Devices, Related Software and Components Thereof (I)

U.S. International Trade Commission Investigation No. 337-TA-944 Enforcement Proceedings

Testimony before the U.S. International Trade Commission on April 5, 2017, *Rebuttal Witness Statement* dated February 27, 2017, *Deposition* on February 6, 2017, *Supplemental Rebuttal Expert Report* on February 4, 2017 and *Rebuttal Report* on February 1, 2017 on behalf of respondent Arista Networks, Inc., regarding proposed penalty due to alleged non-compliance with a Cease and Desist Order issued in the underlying 944 investigation.

Telesocial Inc. v. Orange S.A., et al., USDC for the Northern District of California Case No. 3:14-cv-0398-JD

Deposition on December 22, 2016 and *Expert Report* dated December 12, 2016, on behalf of defendant Orange S.A., responding to plaintiff’s expert’s report with regard to alleged damages incurred by plaintiff due to defendant’s alleged misappropriation of trade secrets.

AI-Daiwa, Ltd. v. Apparent, Inc., et al., US District Court for the Northern District of California Case No. CV13-04156(VC)

Deposition on August 14, 2015 and *Expert Rebuttal Report* dated July 29, 2015 on behalf of claimant AI-Daiwa, Ltd. regarding damages due to claimant’s alleged breach of contract.

Alan J. Cox

Comcast Cable Communications, LLC, et al. v. Sprint Communications Company L.P., et al., US District Court for the Eastern District of Pennsylvania Case No. 2:12-cv-00859-JD

Deposition on April 1, 2016, *Expert Report* dated July 15, 2015 on behalf of defendants Sprint Communications Company L.P., Sprint Spectrum L.P., and Nextel Operations, Inc. (“Sprint”) regarding the purported reasonable royalty damages experienced by Comcast due to Sprint’s alleged infringement of Comcast’s patent.

Sprint Communications Company L.P., et al. v. Comcast Cable Communications LLC, et al., US District Court for the Eastern District of Pennsylvania Case No. 2:12-cv-00859-JD

Direct Trial Testimony and *Cross-Examination* in the Eastern District of Pennsylvania on February 9 and 10, 2017, *Deposition* on April 1, 2016, *Reply Expert Report* dated July 29, 2015 and *Expert Report* filed on June 17, 2015, on behalf of counterclaim-plaintiffs Sprint Communications Company L.P. and Sprint Spectrum L.P. (“Sprint”) regarding reasonable royalty damages experienced by Sprint due to Comcast’s alleged infringement of Sprint’s patents.

Class Certification

Ivan and Melanie Kail, Barry Garfinkel, Frederick Sharp v. Wolf Appliance, United States District Court for the Eastern District of New York.

Deposition on April 17, 2019, *Expert Rebuttal Report* dated March 7, 2019 on behalf of defendant, Wolf Appliance, Inc. Expert rebuttal of proposed damages methodology and class certification regarding Wolf ovens in the U.S.

Vicky Maldonado, et al. v. Apple Inc., et al., U.S.D.C. for the Northern District of California, San Francisco Division Case No. 3:16-cv-04067-WHO

Deposition on April 15, 2019, *Declaration and Expert Report in Support of Defendants’ Opposition to Class Certification* dated April 8, 2019 on behalf of Apple Inc., AppleCare Service Company, Inc. and Apple CSC Inc. in rebuttal to Plaintiffs’ Economic Expert report on class certification related to Apple service plans for iPhones and iPads in the U.S.

In Re Korean Ramen Antitrust Litigation, U.S. District Court for the Northern District of California, San Francisco Division, Case No. 3:13-cv-04115-WHO

Trial testimony on December 12-13, 2018, *Deposition* on September 27, 2017, *Reply Expert Report* dated August 18, 2017, *Supplemental Expert Report* dated July 21, 2017, *Reply Declaration* dated November 2, 2016, *Deposition testimony* on October 7, 2016 and *Declaration* of Alan J. Cox dated August 24, 2016 on behalf of Defendants Nongshim Co., Ltd., Nongshim America, Inc., Ottogi Co. Ltd and Ottogi America, Inc. responding in opposition to Motions by Direct Purchaser Plaintiffs and Indirect Purchaser Plaintiffs for Class Certification relating to the sales of Korean ramen products in the United States by Defendants.

Fabienne English, et al. v. Apple Inc., Applecare Service Company, Inc. and Apple CSC Inc., US District Court for the Northern District of California Case No. 3:14-cv-01619-WHO.

Deposition, September 25, 2015 and *Expert Report*, September 9, 2015 in rebuttal to Plaintiffs’ Economic Expert report on class certification related to Apple service plans for iPhones.

Contract Disputes

Major Brands, Inc. v. Mast-Jägermeister US, Inc., et al., U.S.D.C. for the Eastern District of Missouri Eastern Division, Case No. 4:18-cv-00423-HEA

Trial testimony, November 18, 2020. *Reply Report* dated December 4, 2020. *Deposition* dated September 2, 2020, *Initial Expert Report* dated November 1, 2019 on behalf of plaintiff Major Brands, Inc. regarding damages suffered by Major Brands as a result of the alleged wrongful termination of the Distribution Agreement and the alleged wrongful actions by the defendants.

Cypress Insurance Company, as subrogee of Microsoft Corporation, v. SK hynix America, Inc., USDC, for the Western District of Washington at Seattle Case No. 2:17-cv-00467-RAJ, Filed: March 23, 2017.

Trial testimony on March 19, 2019, *Deposition* dated October 10, 2018, *Rebuttal Expert Report* dated September 25, 2018, *Initial Expert Report* dated September 4, 2018 regarding economic issues related to an alleged breach of a supply agreement for DRAM chips between SK Hynix America and Microsoft Corporation.

PUBLICATIONS

“The Damages Testimony in VLSI Technologies v. Intel,” Guest Post on Patently-O, March 19, 2021. [Guest Post by Alan Cox: The Damages Testimony in VLSI Technologies v. Intel | Patently-O \(patentlyo.com\)](https://patentlyo.com/guest-post-by-alan-cox-the-damages-testimony-in-vlsi-technologies-v-intel/)

David S. Almeling, et al., *Disputed Issues in Awarding Unjust Enrichment Damages in Trade Secret Cases*, 19 Sedona Conf. J. 667 (2018).

“The Limitations of Analytical Approach to Reasonable Royalty,” published April 13, 2017 in *Law360*. Dr. Cox offers a rebuttal to a previously published *Law360* article, “Determining Reasonable Royalties with Analytical Approach.” He provides a detailed counterargument explaining that the analytical approach is inappropriate for the valuation of intellectual property and that it is especially ill-suited for complex products.

“Using Citation Analysis to Value Patents,” published in *Financier Worldwide* Magazine January 2016 Issue.

“Misuse of Patent Citation Analysis in *Finjan v. Blue Coat*,” published October 7, 2015 in *Law360*. Dr. Cox provides an overview of how to assess patent values using quantitative data on number of forward citations received by a patent.

Article, “Off the Wagon,” published February 6, 2015 in *Commercial Dispute Resolution* magazine. The article discusses the analysis used to calculate damages based on lost profits to Major Brands due to both the alleged breach of contract by Diageo and tortious interference by the competing distributor.

“The Demise of Junk Science and the 25% Rule,” column published in *IPLaw360*, 29 July 2010, with Stephen Rusek. It discusses the use of the so-called 25 Percent Rule which the writers point out has no rational, scientific, or business basis. This lack of principal combined with the *ad hoc* manner in which the purported rule is implemented can also give wildly unpredictable results.

“Three Cases Reshaping Patent Licensing Practice,” article published in *Managing Intellectual Property*, 1 March 2010, with Dr. Elizabeth M. Bailey and Dr. Gregory K. Leonard.

“Compensatory Damages Issues in Patent Infringement Cases: A Handbook for Federal District Court Judges.” Participation, with committee members, which included legal practitioners, trial judges, damages experts, and academics, in the development of a handbook for trial courts to consult on procedural practices that may be helpful in the management and adjudication of damages issues in patent cases. 20 January 2010.

“2 Economists’ Take On *i4i V. Microsoft*,” column published in *Law360*, 23 November 2009, with Mario Lopez, reviewing the damages raised in the CAFC’s hearings in the I4I case and the appropriate standards for estimating damages in patent infringement cases.

PRESENTATIONS AND WORKING PAPERS

Panelist for Webinar *TCL v. Ericsson* FRAND Decision: Legal Implications LIVE Webcast, September 07, 2018, The Knowledge Group, LLC.

Panelist, “Settling Trade Secret Disputes,” webinar hosted by the Intellectual Property Owners Association IP Chat Channel on January 30, 2018. Joining Dr. Cox were Victoria Cundiff of Paul Hastings and Barbara Reeves, mediator and arbitrator at JAMS.

Dr. Cox led a panel discussion on “Reasonable Royalty in FRAND” at the 2017 National Technology Law Conference in Taipei, Taiwan. The conference, presented by the National Chiao Tung University School of Law, was held on 25-26 October 2017.

October 13, 2017, invited speaker at the 6th Annual US-China Intellectual Property Summit co-hosted by Loyola Law School, The Berkeley Center for Law and Technology, and China Renmin University IP Academy. Dr. Cox spoke on “New Trends in IP Litigation, Courts, and Enforcement.”

Dr. Cox addressed a conference on “Economics in IP and IP in Economics” held at Renmin University in Beijing on 14-15 July 2016. He discussed issues on the appropriate calculation of damages in IP matters and related issues in antitrust. Dr. Cox also appeared as an expert invited by the USPTO and met with the judges of the Jiangsu and Guangdong High Courts.

Panelist at a video webcast titled “Preparing for an Exit: Private Company Valuation,” hosted by Expert Webcast on April 28, 2016. Dr. Cox discussed techniques and considerations in the valuation of Intellectual Property.

Alan J. Cox

Invited speaker at the *Eighth Annual International Legal Alliance Summit & Awards*, organized by Leaders League, in New York City on June 24, 2015. Dr. Cox participated in an expert insights session entitled “International IP Trends: Litigation & Prosecution, IP Wars.”

July 22, 2015, Panelist on “Meeting the Challenge of Patent Valuation” at the CPIP’s Summer Institute in Patent Law, Beaver Creek CO, sponsored by Center for the Protection of Intellectual Property, George Mason University School of Law.

Keynote Speaker, at the *2014 International Symposium on Damages for Patent Infringement*, hosted by the Taiwan Intellectual Property Training Academy (TIPA): Taipei, Taiwan on October 24, 2014. Dr. Cox presented “Determining Patent Damages: Lessons and Challenges from the US” and served as a panelist in a session entitled “Damage Calculation of Patent Infringement in Taiwan: Observations on Development in Recent Years.”

Program Co-chair, “Litigating Patent Damages: Strategic Issues for Proving and Refuting Damages Claims,” hosted by Law Seminars International, San Francisco May 29-30, 2014. Dr. Cox also took part on a panel and discussed issues raised in *CMU v. Marvell*: Foreign Sales and the use of the Analytical Method as an alternative to the Hypothetical Negotiation, including products made and sold outside the U.S. in the royalty base.

“Intangibles: The Challenge of Understanding Value Creation within Multinational Enterprises.” In this NERA seminar, held in Paris on 12 December 2013, Dr. Cox and NERA colleagues, Dr. Emmanuel Llinares and Vice President Sébastien Gonnet discussed how to identify and map intangibles within multinational enterprises (MNEs), and presented the economic framework for intangibles valuation.

Presentation to Gibson Dunn & Crutcher, LLP titled “Determining Whether a Stock (or Stocks) Traded Efficiently and the Deutsche Bank Decision,” in San Francisco on December 4, 2013. Discussed issues involved in Securities 10b5 cases as they relate to efficient markets and explored the US District Court’s interesting decision in *Deutsch Bank*.

Presentation to Latham & Watkins, LLP titled “Determining Whether a Stock (or Stocks) Traded Efficiently,” in San Francisco on October 15, 2013.

Participation, in *Economics Analysis of Business Disputes*, seminar hosted by NERA in Tokyo on July 19, 2013. Dr. Cox and Economists from NERA’s Japan and US offices examined recent economic analyses in complex business disputes and litigation in Japan and the United States. Dr. Cox presented “Trends in Patent Litigation in the United States: Consequences for Global Companies.”

Presentation to Haynes and Boone, LLP titled “Patent Trolls or Patent Angels: Who are They and How Do They Affect Innovation?” in Dallas, Texas on June 12, 2013.

Alan J. Cox

Participation in the *IP Strategy Summit: Enforcement*, hosted by IGlobal Forum in Washington, DC on 29-30 May 2013. “Standard Essential Patents (SEPS) and Your Enforcement Strategy,” moderated by NERA colleague, Dr. David Blackburn, and panelists Dr. Alan Cox, Paul Michel, retired Chief Judge of the Federal Circuit and Laura Beth Miller of Brinks Hofer Gibson & Lion discussed the current SEPs landscape in light of recent disputes among smartphone technology owners, the recent RAND decision in the *Microsoft v. Motorola* case and trends in both federal courts and the US International Trade Commission. Dr. Cox also took part on a panel entitled “International Enforcement: Globalization and Your IP,” which covered intellectual property enforcement issues in China, India and Europe.

Dr. Cox was invited to be a panelist on the IPO IP Chat Channel webinar on “FRAND Determined: Judge Robart’s Decision in *Microsoft v. Motorola/Google*,” on May 9, 2013. Joining Dr. Cox were William Coats of Greenberg Traurig and Sandy Block of IBM.

“Effective Responses to Patent Trolls: We Can Cross That Bridge.” Alan Cox and Bob Skitol of Drinker Biddle were joined by Cynthia Bright, Esq. of Hewlett-Packard Company, Michelle Lee, Director, USPTO Silicon Valley; and Fiona Scott Morton, Professor, Yale School of Management at NERA/DrinkerBiddle hosted luncheon conference on May 8, 2013 in East Palo Alto. Dr. Cox discussed effective responses to patent infringement claims and threats of such claims from patent assertion entities.

Presentation to Winston & Strawn LLP titled “The Use of Comparable Licenses” with NERA colleague Anne Gron, Ph.D. in Chicago on May 1, 2013.

Presentation to Steptoe & Johnson LLP titled “Rigorous Economic Basis for Calculating and Proving IP Damages” in Washington, DC on April 12, 2013.

Dr. Cox was invited to address the course in “Intellectual Property Legal Practice” at Beijing University School of Law on 3 March 2013. The course, managed by the Beijing office of King & Wood Mallesons, is designed to enable students to master the basic theory and practices of intellectual property law. Dr. Cox discussed issues of intellectual property valuation, damages assessment, and possible anticompetitive uses of intellectual property incorporated into standards.

Participation, in the 2012 *Cross-Border IPR Dispute Resolution Conference*, hosted by ASCo: Seoul, Korea on October 17-18, 2012. NERA sponsored this conference, where Dr. Cox led a master class entitled “IPR Negotiation: Effective Calculation of Patent Damages and Negotiation Tactics.”

Presentation, a GIL 2012: The Global Community of Growth, Innovation and Leadership, hosted by the GIL Community: San Jose, California. Dr. Cox gave a presentation on “Developments in IP Protection in China” on September 12, 2012.

Presentation to Latham & Watkins, LLP titled “Current Use of Economic Analyses in Class Certification in Securities Fraud Matters” with NERA colleague Stefan Boettrich in New York City on January 17, 2012.

Alan J. Cox

Participation in “The Lifecycle of a US ‘Class Action’ Lawsuit: What Chinese Companies Need to Know,” hosted by Marsh: Beijing, China, November 1, 2011.

“Recent trends in US patent litigation and the impact on non-US companies” presentation at the 8th Annual Asia-Pacific IP Forum in, Kowloon, Hong Kong on September 29, 2011.

“International Trends in Securities Fraud Litigation and the Impact on Chinese Companies,” presentation with NERA colleague Mark Berenblut, hosted by the Hong Kong Society of Financial Analysts on September 27, 2011 in Hong Kong. Dr. Cox discussed the economics of damages claims in lawsuits alleging securities fraud by directors and officers of companies listed on the US and other stock exchanges.

“Comparables: the use and misuse of benchmark royalty rates for patent damages,” hosted by Dewey LeBeouf, San Francisco on July 12, 2011. Dr. Cox addressed the role of licenses and industry benchmarks in the determination of reasonable royalties.

Panelist at the “Stanford IP Seminar for Intellectual Property Judges from The People’s Republic of China,” hosted by Stanford Law School May 23-27, 2011. Dr. Cox and co-panelist, USDC for the Northern District of California, Elizabeth D. Laporte, Magistrate Judge, discussed current United States intellectual property law and patent damages.

“Licensing and Litigating Reasonable Royalties for the Patents in Technical Standards,” hosted by the Austin Chapter of Licensing Executives Society (LES) on May 31, 2011. Dr. Cox discussed the difficulties in defining a Fair, Reasonable, and Non-Discriminatory (FRAND) royalty, an issue that often results in litigation.

“Implications of Recent Legal Developments on the Handling of Patent Cases in the Trial Court.” Dr. Cox discussed the evolving standards in damages estimation at the patent litigation presentation to the District Judicial Council for the Southern District of California on April 25, 2011 in Dana Point, CA.

“Unlocking *Uniloc*: Meeting the Court’s New Evidentiary Standards for Reasonable Royalties,” one of a series of roundtable discussions hosted by NERA in San Francisco on March 3 and Palo Alto, California on March 4, 2011.

Moderator, “*Uniloc v. Microsoft*: A Key New Ruling for Patent Damages,” expert analysis telebriefing hosted by Law Seminars International on January 21, 2011.

Presentation to Allen and Overy LLP and to Ashurst LLP titled “The Simple Economics of Reasonable Royalties for Patents Incorporated into a Technical Standard,” in London on December 6, 2010.

“Trends in Intellectual Property Protection and Antitrust Enforcement in China,” seminar hosted by NERA in San Francisco on November 3, 2010.

Alan J. Cox

Presentation at Foley & Lardner LLP's "Eye on China Roundtable Series," by Dr. Cox with Victor Xue, Executive Vice-President, US-China Green Energy Council and Catherine Sun, Managing Partner, Foley & Lardner Shanghai Offices, titled "IP Enforcement in China 2010: Myth or Reality?" given in Palo Alto on November 1, 2010.

Silicon Valley Chapter of Licensing Executives Society, Panelist, "Licensing and Litigating Reasonable Royalties for the Patents in Technical Standards," September 22, 2010.

"Tips for Determining 'Reasonable' Royalties: The impact of recent case law on the economic analysis." Presentations at conference on "Legal Issues in Software Development," sponsored by Law Seminars International on June 16, 2010, in Seattle, WA.

Presentation to ZTE Corporation on June 4, 2010 in Shenzhen, China on patent infringement damage calculations in the United States.

Presentation to the Supreme People's Court of the People's Republic of China, including Chief Justice Kong Xiangjun, on May 26, 2010. Dr. Cox, together with NERA colleague, Dr. Fei Deng, discussed the methods used in the United States to calculate damages in patent, trade secret, and trademark infringement litigation. They also discussed antitrust issues related to intellectual property.

"Infringement Decisions and Judgments: Important Lessons from High Profile Cases," presented at the 2nd Annual Anti-Monopoly & Competition Law Summit held May 25-27 in Beijing. Dr. Cox discussed the differing treatment of *Intel* in jurisdictions around the world.

Panelist, "Trade Secret Remedies—Getting Creative," one-hour webinar hosted by the Intellectual Property Owners Association IP Chat Channel on April 1, 2010.

"Using Economics to Accurately Value IP," presentation with colleagues, Stephen Rusek and Dr. Mario Lopez, given at the Fenwick & West LLP Mountain View office on February 25, 2010.

"Damage Quantification in Patent Litigation: Putting the 'Reasonable' in Reasonable Royalty Rate Determinations," seminar hosted by NERA in Toronto, Canada on December 9, 2009. Dr. Cox and colleague, Mark Berenblut discussed patent valuation and reasonable royalties.

"Groundhog Day: Recurring Themes on Reasonable Royalties in Recent IP Damage Cases," NERA working paper, December 7, 2009, with colleagues Dr. Elizabeth M. Bailey and Dr. Gregory K. Leonard.

APPENDIX B

Documents Reviewed

In Connection with

**Thomson Reuters Enterprise Centre GmbH and West Publishing Corporation, v. ROSS
Intelligence Inc.**

Case No. 20-613-SB

Court Documents

- Plaintiffs Thomson Reuters Enterprise Centre GmbH and West Publishing Corporation's Complaint against Defendant ROSS Intelligence, dated May 6, 2020
- Plaintiffs and Counterdefendants Thomson Reuters Enterprise Centre GmbH and West Publishing Corporation's Second Supplemental Response and Objections to Defendant and Counterclaimant ROSS Intelligence Inc.'s Interrogatory No. 1. Interrogatory No. 1 asks Plaintiffs to "IDENTIFY the specific portions of the WESTLAW CONTENT that you claim is subject to copyright that ROSS INFRINGES."
- Sealed Order, signed by Judge Stephanos Bibas, dated July 25, 2022
- 17 USC § 107
- Plaintiffs and Counterdefendants Thomson Reuters Enterprise Centre GmbH and West Publishing Corporation's Second Supplemental Responses And Objections To Defendant And Counterclaimant Ross Intelligence Inc.'s Interrogatory No. 21
- Plaintiffs and Counterdefendants Thomson Reuters Enterprise Centre GmbH and West Publishing Corporation's Responses and Objections to Defendant and Counterclaimant ROSS Intelligence Inc.'s First Set of Requests for Admission (Nos. 1-129)
- Plaintiffs / Counterdefendants' Answer to Defendant / Counterclaimants Amended Counterclaims

Deposition Transcripts

- Deposition of Isabelle Moulinier 30(b)(6) Representative for Plaintiffs West Publishing Corporation and Thomson Reuters Enterprise Centre GmbH, pp. 103-104
- Deposition of Teri Whitehead, pp. 33-34, 37
- Deposition of Christopher Cahn, 30(b)(6) Representative for Morae Deposition

Transcript, pp. 220-225

Expert Reports

- Report of Defendants' Expert L Karl Branting, J.D., Ph.D.

Correspondences

- Correspondence with Dr. L Karl Branting, dated July 6, 2022
- Correspondence with Dr. L Karl Branting and Jimoh Ovbiagele, dated July 18, 2022

Publicly Available Documents

- Exhibit 1 (Ambrogi, Robert, "Westlaw's Days Are Numbered," <https://www.lawnext.com/2015/05/westlaws-days-are-numbered.html> (Accessed July 1, 2022))
- Exhibit 2 (Company History, <https://www.thomsonreuters.com/en/about-us/company-history.html> (Accessed June 27, 2022))
- Exhibit 3 (New York Times, "West Publishing Purchase By Thomson Is Approved," <https://www.nytimes.com/1996/06/20/business/the-media-business-west-publishing-purchase-by-thomson-is-approved.html> (Accessed July 1, 2022))
- Exhibit 4 (Thomson Reuters, 2021 Annual Report, p. 8, <https://ir.thomsonreuters.com/static-files/6938b043-b0c4-453f-842a-90ac19b5febd> (Accessed June 27, 2022))
- Exhibit 5 (Thomson Reuters 2021 Fact Book, available at <https://ir.thomsonreuters.com/financial-information/fact-book> (Accessed July 24, 2022))
- Exhibit 6 (ROSS Intelligence, "Our Company," <https://www.rossintelligence.com/about-us> (Accessed July 1, 2022))
- Exhibit 7 (ROSS Intelligence, "How is Natural Language Search Changing The Face of Legal Research?," <https://blog.rossintelligence.com/post/how-natural-language-search-changing-face-of-legal-research> (Accessed July 5, 2022))
- Exhibit 8 (ROSS Intelligence, "ROSS Intelligence Secures \$13 Million to Transform Legal Industry," <https://blog.rossintelligence.com/post/ross-intelligence-secures-13-million> (Accessed July 5, 2022))
- Exhibit 9 (ROSS Intelligence, "Announcement," <https://blog.rossintelligence.com/post/announcement> (Accessed July 1, 2022))

- Exhibit 10 (Stanford Law School, “West Key Number System,” <https://guides.law.stanford.edu/cases/keynumbersystem> (accessed July 22, 2022))
- Exhibit 11 (University of Arizona, “West Key Number System,” <https://libguides.library.arizona.edu/c.php?g=847161&p=6793295#s-lg-box-21620967> (accessed July 22, 2022))
- Exhibit 12 (Lemley, Mark A., and Bryan Casey. "Fair learning." Tex. L. Rev. 99 (2020): 743)
- Exhibit 13 (ScienceDaily, “Use artificial intelligence to identify, count, describe wild animals.” www.sciencedaily.com/releases/2018/06/180605124148.htm (accessed July 25, 2022))
- Exhibit 14 (YouTube, “Topic and Key Number Searching on Westlaw,” <https://www.youtube.com/watch?v=LM8BuBIED0o> (accessed July 27, 2022))
- Exhibit 15 (Westlaw Quick Reference Guide, “Searching with Terms and Connectors: Retrieving Documents on Westlaw,” <https://law.lclark.edu/live/files/9394-westlaw-terms-and-connectors-searching> (accessed July 27, 2022))
- Exhibit 16 (Foster, Lynn, and Bruce Kennedy. "Technological Developments in Legal Research." J. App. Prac. & Process 2 (2000): 275, p. 277)
- Exhibit 17 (Merriam-Webster, “artificial intelligence,” <https://www.merriam-webster.com/dictionary/artificial%20intelligence> (accessed June 24, 2022))
- Exhibit 18 (IBM, “Artificial Intelligence (AI),” <https://www.ibm.com/cloud/learn/what-is-artificial-intelligence> (accessed June 24, 2022))
- Exhibit 19 (Thomson Reuters, “Start Fall with Westlaw,” <https://lawschool.thomsonreuters.com/> (accessed July 31, 2022))
- Exhibit 20 (Sloan, Amy E. (2021) Basic Legal Research: Tools and Strategies, Eighth Edition. (Aspen Coursebook Series). Wolters Kluwer. Kindle Edition. Chapter 2. Understanding Search Options, Section B. Source-Driven Search Process)
- Exhibit 21 (“Editorial Enhancements,” <https://legal.thomsonreuters.com/en/products/westlaw/editorial-enhancements> (accessed July 31, 2022))

- Exhibit 22 (Thomson Reuters, “Westlaw: Our people. Your peace of mind,” <https://store.legal.thomsonreuters.com/law-products/westlaw-legal-research/q-and-a-with-robin-germandt-key-number-system> (accessed June 26, 2022))
- Exhibit 23 (Hellyer, Paul. "Assessing the influence of computer-assisted legal research: a study of California Supreme Court opinions." *Law Libr. J.* 97 (2005): 285)
- Exhibit 24 (Landes, William M., and Richard A. Posner. *The economic structure of intellectual property law*. Harvard university press, 2003. pp. 115-123)
- Exhibit 25 (Bell, Abraham, and Gideon Parchomovsky. "Propertizing fair use." *Va. L. Rev.* 107 (2021): 1255)
- Exhibit 26 (Thomson Reuters, “Product: Westlaw Edge,” <https://legal.thomsonreuters.com/en/products/westlaw-edge> (accessed May 1, 2022))
- *Ty, Inc. v. Publications International Ltd.* 292 F.3d 512, 517 (7th Cir. 2002)
- Complementarity-An Essay on the 40th Anniversary of the Hicks-Allen Revolution in Demand Theory.” *Journal of Economic Literature* 12, no. 4 (1974): 1255–89
- Stern, David I. “Elasticities of Substitution and Complementarity.” *Journal of Productivity Analysis* 36, no. 1 (2010): 79–89
- Klein, Benjamin, Andres V Lerner, and Kevin M Murphy. “The Economics of Copyright ‘Fair Use’ in a Networked World.” *American Economic Review* 92, no. 2 (2002): 205–8
- Boldrin, Michele, and David K. Levine. “The Economics of Ideas and Intellectual Property.” *Proceedings of the National Academy of Sciences*, December 10, 2004, 1252–56
- Google's Response RE Fourth Fair Use Factor (United States District Court Northern District of California San Francisco Division April 20, 2017)
- Reichman, J. H., and Pamela Samuelson. “Intellectual Property Rights in Data?” *Vanderbilt Law Review* 50, no. 1 (January 1997)
- Gordon, Wendy J. “Fair Use as Market Failure: A Structural and Economic Analysis of the ‘Betamax’ Case and Its Predecessors.” *Columbia Law Review* 82, no. 8 (1982): 1600
- Turner, Lizzie. “Machine Learning: A Primer.” *Medium*. Medium, June 27, 2018. <https://medium.com/@lizziedotdev/lets-talk-about-machine-learning-ddca914e9dd1>
- McJohn, Stephen M. “Fair Use and Privatization in Copyright.” *San Diego Law Review* 35, no. 61 (1998): 61–109

- Patry, William F., and Richard A. Posner. "Fair Use and Statutory Reform in the Wake of Eldred." California Law Review 92, no. 6 (2004): 1639
- Legg, Michael, and Felicity Bell. "Artificial Intelligence and the Legal Profession: Becoming the AI-Enhanced Lawyer." University of Tasmania Law Review 34, no. 59 (2020)
- Cotter, Thomas. "Fair Use and Copyright Overenforcement." Iowa Law review 93 (2008): 1271
- Sloan, Allan K. Basic Legal Research: Tools and Strategies. 8th ed. New York: Aspen Publishers, 2009
- Hook, Peter A., and Kurt R. Mattson. "Surprising Differences: An Empirical Analysis of LexisNexis and West Headnotes in the Written Opinions of the 2009 Supreme Court Term." Law Library Journal 109 (2018)
- 4 Nimmer on Copyright § 13.05 (2022)
- Sega Enterprises Ltd. v. Accolade, Inc., 977 F.2d 1510 (9th Cir. 1992)
- Sony Computer Entertainment, Inc. v. Connectix Corp., 203 F.3d 596, 607 (9th Cir. 2000)
- Kwok, Kelvin Hiu Fai. "Google book search, transformative use, and commercial intermediation: an economic perspective." Yale JL & Tech. 17 (2015): 283.

Bates Stamped Documents

- TR-0179830
- TR-0179838
- TR-0179843
- TR-0044730
- TR-0526552
- TR-0179884
- TR-0734270
- TR-0179887
- TR-0179889

- TR-0179885
- TR-0179877
- TR-0179884
- TR-0179863
- TR-0179876
- TR-0179867
- ROSS-003332368
- ROSS-000000001
- TR-0036336
- TR-0037669
- TR-0000030
- TR-0836004

EXHIBIT AL

~~CONFIDENTIAL – ATTORNEYS’ EYES ONLY~~

**EXPERT REBUTTAL REPORT
OF
ALAN J. COX, PH.D.**

In Connection with

*Thomson Reuters Enterprise Centre GmbH and West Publishing Corporation, v. ROSS
Intelligence Inc.*

Case No. 20-613-SB

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

September 6, 2022

CONFIDENTIAL—ATTORNEYS’ EYES ONLY

NATIONAL ECONOMIC RESEARCH ASSOCIATES

FOUR EMBARCADERO CENTER, SUITE 400
SAN FRANCISCO, CA 94111

TELEPHONE: 415.291.1000 FACSIMILE: 415.291.1020

**Expert Rebuttal Report of
Alan J. Cox, Ph.D.**

TABLE OF CONTENTS

I. QUALIFICATIONS 1

II. CONFIDENTIALITY..... 3

III. ASSIGNMENT..... 3

IV. SUMMARY OF OPINIONS 4

V. FACTS AND DATA CONSIDERED IN FORMING MY OPINIONS 4

VI. [REDACTED] 10

IX. CONCLUSION..... 11

- Exhibit 1**
- APPENDIX A. Resume of Alan J. Cox**
- APPENDIX B. Documents Reviewed**

I. QUALIFICATIONS

1. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

[illegible]

3.

Category	Value (approximate)
Bar 1	80%
Bar 2	100%
Bar 3	90%
Bar 4	95%
Bar 5	88%
Bar 6	15%

[illegible]

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

5. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

6. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

7. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

8. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

9. [REDACTED]
[REDACTED]
[REDACTED]

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

[REDACTED]

10. [REDACTED]

II. CONFIDENTIALITY

11. [REDACTED]

III. ASSIGNMENT

12. [REDACTED]

13. [REDACTED]

¹ Plaintiffs and Counterdefendants Thomson Reuters Enterprise Centre GmbH and West Publishing Corporation’s Complaint (herein, “Complaint”), ¶ 1.

² Plaintiffs and Counterdefendants Thomson Reuters Enterprise Centre GmbH and West Publishing Corporation’s Third Supplemental Response and Objections to Defendant and Counterclaimant ROSS Intelligence Inc.’s Interrogatory No. 1 (herein, “Third Supplemental Response to Interrogatory No. 1”), p. 30. See also *id.*, p. 68 (“[REDACTED]

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

14. [REDACTED]
[REDACTED]
[REDACTED]

IV. SUMMARY OF OPINIONS

15. [REDACTED]
[REDACTED]

■ [REDACTED]
[REDACTED]

■ [REDACTED]
[REDACTED]

■ [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

■ [REDACTED]
[REDACTED]
[REDACTED]

V. FACTS AND DATA CONSIDERED IN FORMING MY OPINIONS

16. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED] (see TR-0179838; TR-0179885).
[REDACTED] (see TR-0179830; TR-0179838; TR-0179843; TR-0044730; TR-0526552).

³ Opening Expert Report of Dr. Jonathan L. Krein (“Krein Report”).

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

VI.

[REDACTED]

17. [REDACTED]

18. [REDACTED]

A.

[REDACTED]

19. [REDACTED]

20. [REDACTED]

⁴ Krein Report, ¶ 154.

⁵ Pindyck, Robert S., and Rubinfeld, Daniel L. 2018. *Microeconomics* (8th Ed.), Pearson, p. 32.

⁶ “Horizontal Merger Guidelines - August 19, 2010,” U.S. Department of Justice and the Federal Trade Commission, accessed on September 2, 2022, available at <https://www.justice.gov/atr/horizontal-merger-guidelines-08192010>, (“Horizontal Merger Guidelines”), § 4, p. 7 (“Market definition focuses solely on demand substitution factors, i.e., on customers’ ability and willingness to substitute away from one product to another in response to a price increase or a corresponding non-price change such as a reduction in product quality or service.”).

⁷ Pindyck, Robert S., and Rubinfeld, Daniel L. 2018. *Microeconomics* (8th Ed.), Pearson, pp. 34-35.

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

[REDACTED]

21. [REDACTED]

22. [REDACTED]

23. [REDACTED]

⁸ Krein Report, ¶ 50 [REDACTED]

⁹ Krein Report, ¶ 155.

¹⁰ Krein Report, ¶ 154.

¹¹ Krein Report, ¶ 68.

¹² Third Supplemental Response to Interrogatory No. 1, pp. 30, 68-69. See also Deposition of Andrew Martens (“Martens Deposition”), 33:20-34:2 [REDACTED]

¹³ Complaint ¶ 41 (“Westlaw, including, without limitation, the Westlaw Content, is original and creative.”). See also Martens Deposition, 33:20-34:2.

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

24. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

25. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

26. [REDACTED]
[REDACTED]
[REDACTED]

B. [REDACTED]

27. [REDACTED]
[REDACTED]
[REDACTED]

28. [REDACTED]
[REDACTED]

¹⁴ Krein Report, ¶ 153.

¹⁵ Krein Report, ¶ 152-153. [REDACTED]
[REDACTED]

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

[REDACTED]

29. [REDACTED]

30. [REDACTED]

31. [REDACTED]

VII. [REDACTED]

[REDACTED]

¹⁶ Krein Report, ¶ 156.

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

32. [REDACTED]
[REDACTED]

33. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

34. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

35. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

B. [REDACTED] [REDACTED]
[REDACTED]

36. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

37. [REDACTED]

¹⁷ Third Supplemental Response to Interrogatory No. 1, p. 30. See also, *id.* pp. 68-69.

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

[REDACTED]

38. [REDACTED]

39. [REDACTED]

40. [REDACTED]

VIII. [REDACTED]

41. [REDACTED]

¹⁸ [REDACTED] See for example ¶90.

¹⁹ Plaintiffs and Counterdefendants Thomson Reuters Enterprise Centre GmbH and West Publishing Corporation’s Second Supplemental Responses and Objections to Defendant and Counterclaimant ROSS Intelligence Inc.’s Interrogatory No. 21, p. 18. See also, Martens Deposition 102:3-7 [REDACTED] Martens Deposition 230:2 (“ [REDACTED]”; ROSS-003390563.

²⁰ Complaint, ¶ 3.

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

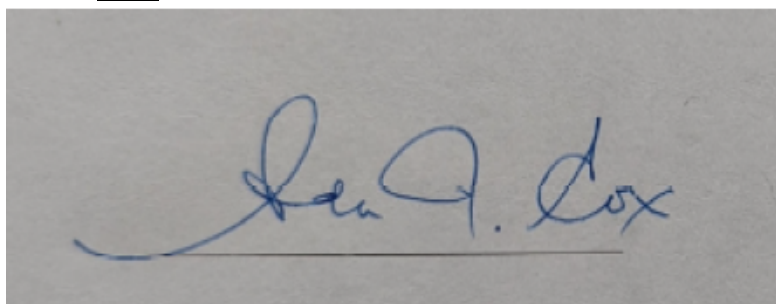
[REDACTED]

42. [REDACTED]

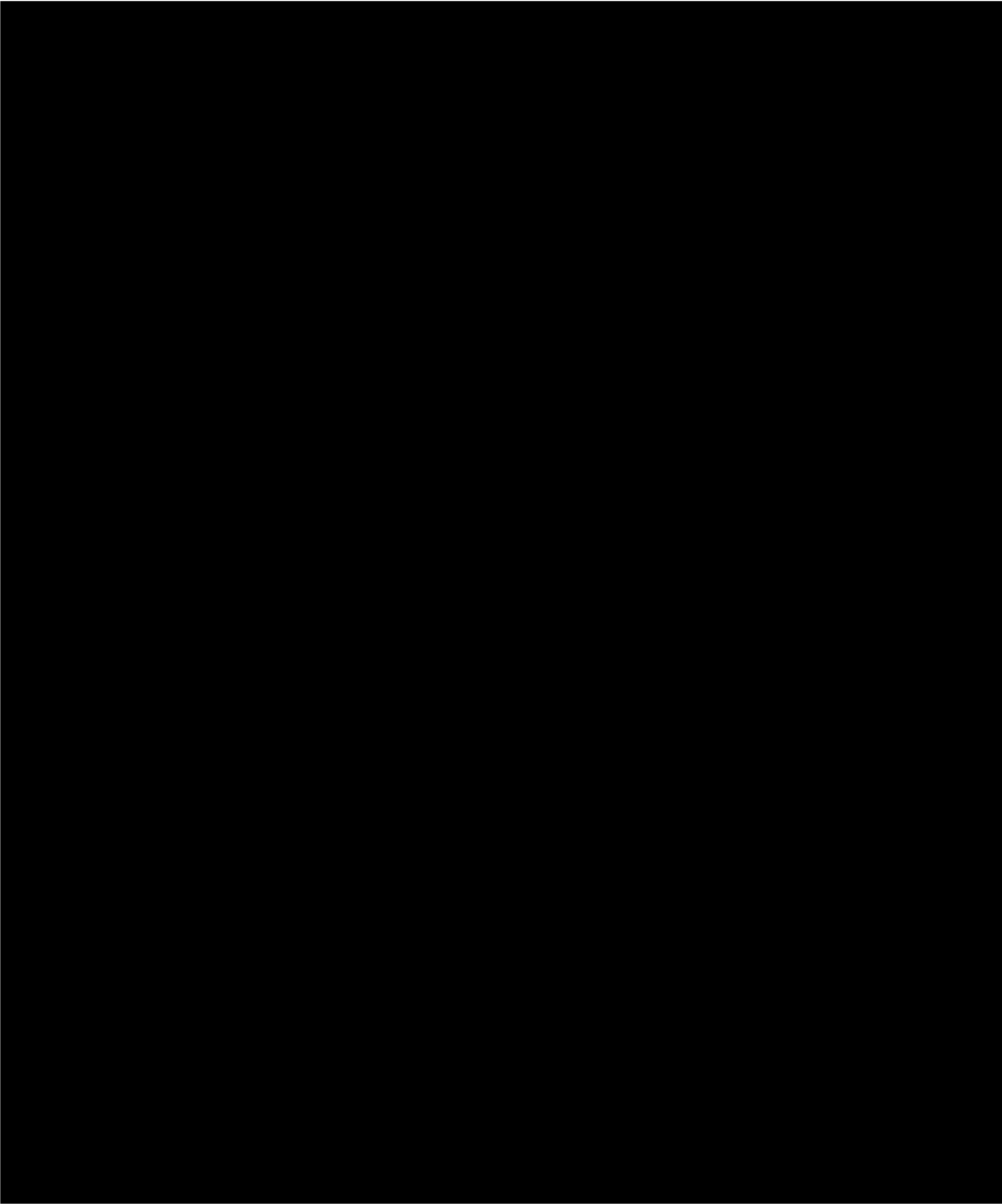
43. [REDACTED]

IX. CONCLUSION

44. [REDACTED]



Alan J. Cox



Alan J. Cox
Independent Economic Consultant

Education

University of California, Berkeley

Ph.D., Business Administration, Economic Analysis and Policy Program, 1989
Major Fields: Industrial Organization, Finance, Econometrics

University of British Columbia

M.A., Economics, 1978

York University, Toronto

B.S., Environmental Science, 1976

Professional Experience

2020	Independent Economic Consultant Affiliated Consultant, NERA Economic Consulting
	NERA Economic Consulting
2020-	Outside Consultant
2016-2018	Chair of NERA's Global Intellectual Property Practice
2001-2019	Managing Director/Senior Vice President
1998-2001	Vice President
1994-1998	Senior Consultant
1988-1989	Senior Analyst
	Law & Economics Consulting Group, Inc.
1989-1994	Vice President and Senior Economist
	University of California, Berkeley
1983-1989	Research Assistant

1985-1987	Minimax Research Corporation Economist
1978-1981	Massachusetts Institute of Technology Visiting Economist
1978	University of British Columbia Research Associate

Teaching Experience

1994-1995	St. Mary's College of California Visiting Lecturer, Graduate School of Management Taught Industrial Structure and Competitive Strategy.
1989	Northeastern University Adjunct Lecturer, Graduate School of Management Taught Managerial Economics.
1984-1985	University of California, Berkeley Teaching Assistant Taught Intermediate Microeconomics.

Expert Testimony, Affidavits, and Reports

(Clients underlined)

Antitrust

Vicky Maldonado, et al. v. Apple Inc., et al., U.S.D.C. for the Northern District of California, San Francisco Division Case No. 3:16-cv-04067-WHO

Deposition on April 15, 2019, *Declaration and Expert Report in Support of Defendants' Opposition to Class Certification* dated April 8, 2019 on behalf of Apple Inc., AppleCare Service Company, Inc. and Apple CSC Inc. in rebuttal to Plaintiffs' Economic Expert report on class certification related to Apple service plans for iPhones and iPads in the U.S.

In Re Korean Ramen Antitrust Litigation, U.S. District Court for the Northern District of California, San Francisco Division, Case No. 3:13-cv-04115-WHO

Trial testimony on December 12-13, 2018, *Deposition* on September 27, 2017, *Reply Expert Report* dated August 18, 2017, *Supplemental Expert Report* dated July 21, 2017, *Reply Declaration* dated November 2, 2016, *Deposition testimony* on October 7, 2016 and *Declaration* of Alan J. Cox dated August 24, 2016 on behalf of Defendants Nongshim Co., Ltd., Nongshim America, Inc., Ottogi Co. Ltd and Ottogi America, Inc. responding in opposition to Motions by Direct Purchaser Plaintiffs and Indirect Purchaser Plaintiffs for Class Certification relating to the sales of Korean ramen products in the United States by Defendants.

Trendsettah USA, Inc. and Trend Settah, Inc. v. Swisher International, Inc., USDC Case No. 8:14-CV-01664-JDS

Trial Testimony March 24 and 29, 2016, *Supplemental Expert Report* dated December 18, 2015, *Deposition* on December 17, 2015 and *Expert Report* dated December 11, 2015 on behalf of defendant Swisher International, Inc. evaluating economic issues related to defendant's alleged anticompetitive conduct and alleged breach of contract.

Intellectual Property

SinCo Technologies Pte, Ltd. v. SinCo Electronics, (Dongguan) Co., Ltd.; XingKe Electronics (Dongguan) Co., Ltd; XingKe Electronics Technology Co., Ltd.; Sincoo Electronics Technology Co., Ltd.; Mui Lang Tjoa (An Individual); Ng Cher Yong Aka Cy Ng (An Individual); And Liew Yew Soon Aka Mark Liew (An Individual) U.S.D.C. for the Northern District of California, Case No. 3:17CV5517 EMC

Expert Report, January 9, 2020 on the economic consequences of defendants' trademark misuse and the appropriate methods for calculating the allowed remedies. *Supplemental Expert Report*, October 1, 2021 commenting late submitted data. *Trial testimony*, November 10 and 12, 2021.

FOX Factory, Inc., v. SRAM, LLC, and Sandleford Limited, U.S.D.C. for the District of Colorado Case Nos. 1:18-cv-00127-WJM-NYW and 1:18-cv-00130-WJM-NYW, Filed: October 11, 2017.

Rebuttal Report dated January 25, 2019 on behalf of defendants, SRAM, LLC and Sandleford Limited regarding purported reasonable royalty damages experienced by FOX, if any, from the alleged patent infringements by defendants.

TC Technology LLC v. Sprint Corporation and Sprint Spectrum, L.P., USDC for the District of Delaware Case No. 1:16-cv-00153-UNA, Filed: March 10, 2016.

Deposition November 20, 2018, *Expert Rebuttal Report* dated October 22, 2018 regarding economic issues regarding purported reasonable royalty damages.

ZF Micro Devices, Inc., et al. v. TAT Capital Partners, LTD., etc., et al, Santa Clara County Superior Court Case No. 1-09-CV 134970, Filed: February 17, 2009.

Deposition on September 14, 2018 on behalf of TAT Capital Partners, LTD regarding damages due to breach of fiduciary duty and conspiracy related to tortious activities.

Thomas Davidson, et al. v. Apple, Inc., U.S.D.C. for the Northern District of California Case No. 5:16-cv-4942-LHK, Filed: August 27, 2016.

Deposition on May 9, 2019, *Expert Rebuttal Report* dated February 15, 2019, *Declaration in Support of Defendant's Opposition to Amended Motion for Class Certification* dated December 6, 2018, *Declaration in Support of Defendant's Opposition to Motion for Class Certification* dated February 9, 2018, on behalf of defendant, Apple Inc. related to economic issues and sale of Apple smartphones in the U.S.

Amgen Inc. and Amgen Manufacturing Limited v. Sandoz Inc., Sandoz International GMBH, Sandoz GMBH, and LEK Pharmaceuticals D.D., USDC for the Northern District of California, San Francisco Division, Case 3:16-cv-02581, Filed: May 12, 2016.

Deposition on October 6, 2017, *Supplemental Expert Report* dated October 2, 2017 and *Expert Report* dated July 28, 2017 regarding lost profits and reasonable royalty damages for alleged patent infringements by Sandoz defendants.

C.R. Bard, Inc. and Bard Peripheral Vascular, Inc. v. AngioDynamics, Inc., U.S.D.C. for the District of Delaware, Case No. 1:15-cv-00218-SLR-SRF, Filed: March 10, 2015

Trial testimony March 6-7, 2019, *Deposition* dated December 13, 2017, *Reply to Supplemental Expert Report* dated December 6, 2017, *Reply Expert Report* dated December 1, 2017, *Expert Report* dated September 1, 2017 on behalf of C.R. Bard, Inc. and Bard Peripheral Vascular, Inc. ("Bard") regarding reasonable royalties and lost profits damages experienced by Bard as a result of alleged patent infringements by AngioDynamics, Inc.

The Regents of the University of California and Becton, Dickinson and Company v. Affymetrix, Inc. and Life Technologies Corp., U.S. District Court for the Southern District of California Case No. 3:17-cv-01394-H-NLS.

Deposition dated February 27, 2019, *Expert Report* dated December 7, 2018 regarding the need for a permanent injunction, lost profits damages, and reasonable royalty damages for the alleged patent infringement by Defendants, *Deposition* on September 22, 2017, *Declaration* in Support of Plaintiff, Becton, Dickinson and Company's Motion for Preliminary Injunction to enjoin sales of allegedly infringing brilliant polymers used in flow cytometry, dated July 12, 2017.

EON Corp. IP Holdings, LLC v. Apple Inc., USDC for the Northern District of California, San Francisco Division Case No. 3:14-CV-05511-WHO

Expert Report dated March 15, 2017 on behalf of Defendant, Apple Inc., regarding reasonable royalty damages experienced by EON Corp. as a result of an alleged patent infringement by Apple Inc.

In the Matter of: Certain Network Devices, Related Software and Components Thereof (I)

U.S. International Trade Commission Investigation No. 337-TA-944 Enforcement Proceedings

Testimony before the U.S. International Trade Commission on April 5, 2017, *Rebuttal Witness Statement* dated February 27, 2017, *Deposition* on February 6, 2017, *Supplemental Rebuttal Expert Report* on February 4, 2017 and *Rebuttal Report* on February 1, 2017 on behalf of respondent Arista Networks, Inc., regarding proposed penalty due to alleged non-compliance with a Cease and Desist Order issued in the underlying 944 investigation.

Telesocial Inc. v. Orange S.A., et al., USDC for the Northern District of California Case No. 3:14-cv-0398-JD

Deposition on December 22, 2016 and *Expert Report* dated December 12, 2016, on behalf of defendant Orange S.A., responding to plaintiff's expert's report with regard to alleged damages incurred by plaintiff due to defendant's alleged misappropriation of trade secrets.

AI-Daiwa, Ltd. v. Apparent, Inc., et al., US District Court for the Northern District of California Case No. CV13-04156(VC)

Deposition on August 14, 2015 and *Expert Rebuttal Report* dated July 29, 2015 on behalf of claimant AI-Daiwa, Ltd. regarding damages due to claimant's alleged breach of contract.

Alan J. Cox

Comcast Cable Communications, LLC, et al. v. Sprint Communications Company L.P., et al., US District Court for the Eastern District of Pennsylvania Case No. 2:12-cv-00859-JD

Deposition on April 1, 2016, *Expert Report* dated July 15, 2015 on behalf of defendants Sprint Communications Company L.P., Sprint Spectrum L.P., and Nextel Operations, Inc. (“Sprint”) regarding the purported reasonable royalty damages experienced by Comcast due to Sprint’s alleged infringement of Comcast’s patent.

Sprint Communications Company L.P., et al. v. Comcast Cable Communications LLC, et al., US District Court for the Eastern District of Pennsylvania Case No. 2:12-cv-00859-JD

Direct Trial Testimony and *Cross-Examination* in the Eastern District of Pennsylvania on February 9 and 10, 2017, *Deposition* on April 1, 2016, *Reply Expert Report* dated July 29, 2015 and *Expert Report* filed on June 17, 2015, on behalf of counterclaim-plaintiffs Sprint Communications Company L.P. and Sprint Spectrum L.P. (“Sprint”) regarding reasonable royalty damages experienced by Sprint due to Comcast’s alleged infringement of Sprint’s patents.

Class Certification

Ivan and Melanie Kail, Barry Garfinkel, Frederick Sharp v. Wolf Appliance, United States District Court for the Eastern District of New York.

Deposition on April 17, 2019, *Expert Rebuttal Report* dated March 7, 2019 on behalf of defendant, Wolf Appliance, Inc. Expert rebuttal of proposed damages methodology and class certification regarding Wolf ovens in the U.S.

Vicky Maldonado, et al. v. Apple Inc., et al., U.S.D.C. for the Northern District of California, San Francisco Division Case No. 3:16-cv-04067-WHO

Deposition on April 15, 2019, *Declaration and Expert Report in Support of Defendants’ Opposition to Class Certification* dated April 8, 2019 on behalf of Apple Inc., AppleCare Service Company, Inc. and Apple CSC Inc. in rebuttal to Plaintiffs’ Economic Expert report on class certification related to Apple service plans for iPhones and iPads in the U.S.

In Re Korean Ramen Antitrust Litigation, U.S. District Court for the Northern District of California, San Francisco Division, Case No. 3:13-cv-04115-WHO

Trial testimony on December 12-13, 2018, *Deposition* on September 27, 2017, *Reply Expert Report* dated August 18, 2017, *Supplemental Expert Report* dated July 21, 2017, *Reply Declaration* dated November 2, 2016, *Deposition testimony* on October 7, 2016 and *Declaration* of Alan J. Cox dated August 24, 2016 on behalf of Defendants Nongshim Co., Ltd., Nongshim America, Inc., Ottogi Co. Ltd and Ottogi America, Inc. responding in opposition to Motions by Direct Purchaser Plaintiffs and Indirect Purchaser Plaintiffs for Class Certification relating to the sales of Korean ramen products in the United States by Defendants.

Fabienne English, et al. v. Apple Inc., Applecare Service Company, Inc. and Apple CSC Inc., US District Court for the Northern District of California Case No. 3:14-cv-01619-WHO.

Deposition, September 25, 2015 and *Expert Report*, September 9, 2015 in rebuttal to Plaintiffs’ Economic Expert report on class certification related to Apple service plans for iPhones.

Contract Disputes

Major Brands, Inc. v. Mast-Jägermeister US, Inc., et al., U.S.D.C. for the Eastern District of Missouri Eastern Division, Case No. 4:18-cv-00423-HEA

Trial testimony, November 18, 2020. *Reply Report* dated December 4, 2020. *Deposition* dated September 2, 2020, *Initial Expert Report* dated November 1, 2019 on behalf of plaintiff Major Brands, Inc. regarding damages suffered by Major Brands as a result of the alleged wrongful termination of the Distribution Agreement and the alleged wrongful actions by the defendants.

Cypress Insurance Company, as subrogee of Microsoft Corporation, v. SK hynix America, Inc., USDC, for the Western District of Washington at Seattle Case No. 2:17-cv-00467-RAJ, Filed: March 23, 2017.

Trial testimony on March 19, 2019, *Deposition* dated October 10, 2018, *Rebuttal Expert Report* dated September 25, 2018, *Initial Expert Report* dated September 4, 2018 regarding economic issues related to an alleged breach of a supply agreement for DRAM chips between SK Hynix America and Microsoft Corporation.

PUBLICATIONS

“The Damages Testimony in VLSI Technologies v. Intel,” Guest Post on Patently-O, March 19, 2021. [Guest Post by Alan Cox: The Damages Testimony in VLSI Technologies v. Intel | Patently-O \(patentlyo.com\)](https://patentlyo.com/guest-post-by-alan-cox-the-damages-testimony-in-vlsi-technologies-v-intel/)

David S. Almeling, et al., *Disputed Issues in Awarding Unjust Enrichment Damages in Trade Secret Cases*, 19 Sedona Conf. J. 667 (2018).

“The Limitations of Analytical Approach to Reasonable Royalty,” published April 13, 2017 in *Law360*. Dr. Cox offers a rebuttal to a previously published *Law360* article, “Determining Reasonable Royalties with Analytical Approach.” He provides a detailed counterargument explaining that the analytical approach is inappropriate for the valuation of intellectual property and that it is especially ill-suited for complex products.

“Using Citation Analysis to Value Patents,” published in *Financier Worldwide* Magazine January 2016 Issue.

“Misuse of Patent Citation Analysis in *Finjan v. Blue Coat*,” published October 7, 2015 in *Law360*. Dr. Cox provides an overview of how to assess patent values using quantitative data on number of forward citations received by a patent.

Article, “Off the Wagon,” published February 6, 2015 in *Commercial Dispute Resolution* magazine. The article discusses the analysis used to calculate damages based on lost profits to Major Brands due to both the alleged breach of contract by Diageo and tortious interference by the competing distributor.

Alan J. Cox

“The Demise of Junk Science and the 25% Rule,” column published in *IPLaw360*, 29 July 2010, with Stephen Rusek. It discusses the use of the so-called 25 Percent Rule which the writers point out has no rational, scientific, or business basis. This lack of principal combined with the *ad hoc* manner in which the purported rule is implemented can also give wildly unpredictable results.

“Three Cases Reshaping Patent Licensing Practice,” article published in *Managing Intellectual Property*, 1 March 2010, with Dr. Elizabeth M. Bailey and Dr. Gregory K. Leonard.

“Compensatory Damages Issues in Patent Infringement Cases: A Handbook for Federal District Court Judges.” Participation, with committee members, which included legal practitioners, trial judges, damages experts, and academics, in the development of a handbook for trial courts to consult on procedural practices that may be helpful in the management and adjudication of damages issues in patent cases. 20 January 2010.

“2 Economists’ Take On *i4i V. Microsoft*,” column published in *Law360*, 23 November 2009, with Mario Lopez, reviewing the damages raised in the CAFC’s hearings in the I4I case and the appropriate standards for estimating damages in patent infringement cases.

PRESENTATIONS AND WORKING PAPERS

Panelist for Webinar *TCL v. Ericsson* FRAND Decision: Legal Implications LIVE Webcast, September 07, 2018, The Knowledge Group, LLC.

Panelist, “Settling Trade Secret Disputes,” webinar hosted by the Intellectual Property Owners Association IP Chat Channel on January 30, 2018. Joining Dr. Cox were Victoria Cundiff of Paul Hastings and Barbara Reeves, mediator and arbitrator at JAMS.

Dr. Cox led a panel discussion on “Reasonable Royalty in FRAND” at the 2017 National Technology Law Conference in Taipei, Taiwan. The conference, presented by the National Chiao Tung University School of Law, was held on 25-26 October 2017.

October 13, 2017, invited speaker at the 6th Annual US-China Intellectual Property Summit co-hosted by Loyola Law School, The Berkeley Center for Law and Technology, and China Renmin University IP Academy. Dr. Cox spoke on “New Trends in IP Litigation, Courts, and Enforcement.”

Dr. Cox addressed a conference on “Economics in IP and IP in Economics” held at Renmin University in Beijing on 14-15 July 2016. He discussed issues on the appropriate calculation of damages in IP matters and related issues in antitrust. Dr. Cox also appeared as an expert invited by the USPTO and met with the judges of the Jiangsu and Guangdong High Courts.

Panelist at a video webcast titled “Preparing for an Exit: Private Company Valuation,” hosted by Expert Webcast on April 28, 2016. Dr. Cox discussed techniques and considerations in the valuation of Intellectual Property.

Alan J. Cox

Invited speaker at the *Eighth Annual International Legal Alliance Summit & Awards*, organized by Leaders League, in New York City on June 24, 2015. Dr. Cox participated in an expert insights session entitled “International IP Trends: Litigation & Prosecution, IP Wars.”

July 22, 2015, Panelist on “Meeting the Challenge of Patent Valuation” at the CPIP’s Summer Institute in Patent Law, Beaver Creek CO, sponsored by Center for the Protection of Intellectual Property, George Mason University School of Law.

Keynote Speaker, at the *2014 International Symposium on Damages for Patent Infringement*, hosted by the Taiwan Intellectual Property Training Academy (TIPA): Taipei, Taiwan on October 24, 2014. Dr. Cox presented “Determining Patent Damages: Lessons and Challenges from the US” and served as a panelist in a session entitled “Damage Calculation of Patent Infringement in Taiwan: Observations on Development in Recent Years.”

Program Co-chair, “Litigating Patent Damages: Strategic Issues for Proving and Refuting Damages Claims,” hosted by Law Seminars International, San Francisco May 29-30, 2014. Dr. Cox also took part on a panel and discussed issues raised in *CMU v. Marvell*: Foreign Sales and the use of the Analytical Method as an alternative to the Hypothetical Negotiation, including products made and sold outside the U.S. in the royalty base.

“Intangibles: The Challenge of Understanding Value Creation within Multinational Enterprises.” In this NERA seminar, held in Paris on 12 December 2013, Dr. Cox and NERA colleagues, Dr. Emmanuel Llinares and Vice President Sébastien Gonnet discussed how to identify and map intangibles within multinational enterprises (MNEs), and presented the economic framework for intangibles valuation.

Presentation to Gibson Dunn & Crutcher, LLP titled “Determining Whether a Stock (or Stocks) Traded Efficiently and the Deutsche Bank Decision,” in San Francisco on December 4, 2013. Discussed issues involved in Securities 10b5 cases as they relate to efficient markets and explored the US District Court’s interesting decision in *Deutsch Bank*.

Presentation to Latham & Watkins, LLP titled “Determining Whether a Stock (or Stocks) Traded Efficiently,” in San Francisco on October 15, 2013.

Participation, in *Economics Analysis of Business Disputes*, seminar hosted by NERA in Tokyo on July 19, 2013. Dr. Cox and Economists from NERA’s Japan and US offices examined recent economic analyses in complex business disputes and litigation in Japan and the United States. Dr. Cox presented “Trends in Patent Litigation in the United States: Consequences for Global Companies.”

Presentation to Haynes and Boone, LLP titled “Patent Trolls or Patent Angels: Who are They and How Do They Affect Innovation?” in Dallas, Texas on June 12, 2013.

Alan J. Cox

Participation in the *IP Strategy Summit: Enforcement*, hosted by IGlobal Forum in Washington, DC on 29-30 May 2013. “Standard Essential Patents (SEPS) and Your Enforcement Strategy,” moderated by NERA colleague, Dr. David Blackburn, and panelists Dr. Alan Cox, Paul Michel, retired Chief Judge of the Federal Circuit and Laura Beth Miller of Brinks Hofer Gibson & Lion discussed the current SEPs landscape in light of recent disputes among smartphone technology owners, the recent RAND decision in the *Microsoft v. Motorola* case and trends in both federal courts and the US International Trade Commission. Dr. Cox also took part on a panel entitled “International Enforcement: Globalization and Your IP,” which covered intellectual property enforcement issues in China, India and Europe.

Dr. Cox was invited to be a panelist on the IPO IP Chat Channel webinar on “FRAND Determined: Judge Robart’s Decision in *Microsoft v. Motorola/Google*,” on May 9, 2013. Joining Dr. Cox were William Coats of Greenberg Traurig and Sandy Block of IBM.

“Effective Responses to Patent Trolls: We Can Cross That Bridge.” Alan Cox and Bob Skitol of Drinker Biddle were joined by Cynthia Bright, Esq. of Hewlett-Packard Company, Michelle Lee, Director, USPTO Silicon Valley; and Fiona Scott Morton, Professor, Yale School of Management at NERA/DrinkerBiddle hosted luncheon conference on May 8, 2013 in East Palo Alto. Dr. Cox discussed effective responses to patent infringement claims and threats of such claims from patent assertion entities.

Presentation to Winston & Strawn LLP titled “The Use of Comparable Licenses” with NERA colleague Anne Gron, Ph.D. in Chicago on May 1, 2013.

Presentation to Steptoe & Johnson LLP titled “Rigorous Economic Basis for Calculating and Proving IP Damages” in Washington, DC on April 12, 2013.

Dr. Cox was invited to address the course in “Intellectual Property Legal Practice” at Beijing University School of Law on 3 March 2013. The course, managed by the Beijing office of King & Wood Mallesons, is designed to enable students to master the basic theory and practices of intellectual property law. Dr. Cox discussed issues of intellectual property valuation, damages assessment, and possible anticompetitive uses of intellectual property incorporated into standards.

Participation, in the 2012 *Cross-Border IPR Dispute Resolution Conference*, hosted by ASCo: Seoul, Korea on October 17-18, 2012. NERA sponsored this conference, where Dr. Cox led a master class entitled “IPR Negotiation: Effective Calculation of Patent Damages and Negotiation Tactics.”

Presentation, a GIL 2012: The Global Community of Growth, Innovation and Leadership, hosted by the GIL Community: San Jose, California. Dr. Cox gave a presentation on “Developments in IP Protection in China” on September 12, 2012.

Presentation to Latham & Watkins, LLP titled “Current Use of Economic Analyses in Class Certification in Securities Fraud Matters” with NERA colleague Stefan Boettrich in New York City on January 17, 2012.

Alan J. Cox

Participation in “The Lifecycle of a US ‘Class Action’ Lawsuit: What Chinese Companies Need to Know,” hosted by Marsh: Beijing, China, November 1, 2011.

“Recent trends in US patent litigation and the impact on non-US companies” presentation at the 8th Annual Asia-Pacific IP Forum in, Kowloon, Hong Kong on September 29, 2011.

“International Trends in Securities Fraud Litigation and the Impact on Chinese Companies,” presentation with NERA colleague Mark Berenblut, hosted by the Hong Kong Society of Financial Analysts on September 27, 2011 in Hong Kong. Dr. Cox discussed the economics of damages claims in lawsuits alleging securities fraud by directors and officers of companies listed on the US and other stock exchanges.

“Comparables: the use and misuse of benchmark royalty rates for patent damages,” hosted by Dewey LeBeouf, San Francisco on July 12, 2011. Dr. Cox addressed the role of licenses and industry benchmarks in the determination of reasonable royalties.

Panelist at the “Stanford IP Seminar for Intellectual Property Judges from The People’s Republic of China,” hosted by Stanford Law School May 23-27, 2011. Dr. Cox and co-panelist, USDC for the Northern District of California, Elizabeth D. Laporte, Magistrate Judge, discussed current United States intellectual property law and patent damages.

“Licensing and Litigating Reasonable Royalties for the Patents in Technical Standards,” hosted by the Austin Chapter of Licensing Executives Society (LES) on May 31, 2011. Dr. Cox discussed the difficulties in defining a Fair, Reasonable, and Non-Discriminatory (FRAND) royalty, an issue that often results in litigation.

“Implications of Recent Legal Developments on the Handling of Patent Cases in the Trial Court.” Dr. Cox discussed the evolving standards in damages estimation at the patent litigation presentation to the District Judicial Council for the Southern District of California on April 25, 2011 in Dana Point, CA.

“Unlocking *Uniloc*: Meeting the Court’s New Evidentiary Standards for Reasonable Royalties,” one of a series of roundtable discussions hosted by NERA in San Francisco on March 3 and Palo Alto, California on March 4, 2011.

Moderator, “*Uniloc v. Microsoft*: A Key New Ruling for Patent Damages,” expert analysis telebriefing hosted by Law Seminars International on January 21, 2011.

Presentation to Allen and Overy LLP and to Ashurst LLP titled “The Simple Economics of Reasonable Royalties for Patents Incorporated into a Technical Standard,” in London on December 6, 2010.

“Trends in Intellectual Property Protection and Antitrust Enforcement in China,” seminar hosted by NERA in San Francisco on November 3, 2010.

Alan J. Cox

Presentation at Foley & Lardner LLP's "Eye on China Roundtable Series," by Dr. Cox with Victor Xue, Executive Vice-President, US-China Green Energy Council and Catherine Sun, Managing Partner, Foley & Lardner Shanghai Offices, titled "IP Enforcement in China 2010: Myth or Reality?" given in Palo Alto on November 1, 2010.

Silicon Valley Chapter of Licensing Executives Society, Panelist, "Licensing and Litigating Reasonable Royalties for the Patents in Technical Standards," September 22, 2010.

"Tips for Determining 'Reasonable' Royalties: The impact of recent case law on the economic analysis." Presentations at conference on "Legal Issues in Software Development," sponsored by Law Seminars International on June 16, 2010, in Seattle, WA.

Presentation to ZTE Corporation on June 4, 2010 in Shenzhen, China on patent infringement damage calculations in the United States.

Presentation to the Supreme People's Court of the People's Republic of China, including Chief Justice Kong Xiangjun, on May 26, 2010. Dr. Cox, together with NERA colleague, Dr. Fei Deng, discussed the methods used in the United States to calculate damages in patent, trade secret, and trademark infringement litigation. They also discussed antitrust issues related to intellectual property.

"Infringement Decisions and Judgments: Important Lessons from High Profile Cases," presented at the 2nd Annual Anti-Monopoly & Competition Law Summit held May 25-27 in Beijing. Dr. Cox discussed the differing treatment of *Intel* in jurisdictions around the world.

Panelist, "Trade Secret Remedies—Getting Creative," one-hour webinar hosted by the Intellectual Property Owners Association IP Chat Channel on April 1, 2010.

"Using Economics to Accurately Value IP," presentation with colleagues, Stephen Rusek and Dr. Mario Lopez, given at the Fenwick & West LLP Mountain View office on February 25, 2010.

"Damage Quantification in Patent Litigation: Putting the 'Reasonable' in Reasonable Royalty Rate Determinations," seminar hosted by NERA in Toronto, Canada on December 9, 2009. Dr. Cox and colleague, Mark Berenblut discussed patent valuation and reasonable royalties.

"Groundhog Day: Recurring Themes on Reasonable Royalties in Recent IP Damage Cases," NERA working paper, December 7, 2009, with colleagues Dr. Elizabeth M. Bailey and Dr. Gregory K. Leonard.

APPENDIX B

Documents Reviewed

In Connection with

Thomson Reuters Enterprise Centre GmbH and West Publishing Corporation, v. ROSS
Intelligence Inc.

Case No. 20-613-SB

Court Documents

- Plaintiffs and Counterdefendants Thomson Reuters Enterprise Centre GmbH and West Publishing Corporation's Complaint, dated May 6, 2020
- Plaintiffs and Counterdefendants Thomson Reuters Enterprise Centre GmbH and West Publishing Corporation's Second Supplemental Responses and Objections to Defendant and Counterclaimant ROSS Intelligence Inc.'s Interrogatory No. 21, dated June 9, 2022
- Plaintiffs and Counterdefendants Thomson Reuters Enterprise Centre GmbH and West Publishing Corporation's Third Supplemental Response and Objections to Defendant and Counterclaimant ROSS Intelligence Inc.'s Interrogatory No. 1, dated August 22, 2022

Deposition Transcript

- Deposition of Andrew Martens, a 30(b) (6), Representative for Thomson Reuters, dated March 25, 2022

Expert Reports

- Opening Expert Report of Dr. Jonathan L. Krein, dated August 1, 2022
- Expert Report of Dr. Alan J. Cox, Ph.D., dated August 1, 2022

Academic Literature

- Pindyck, Robert S., and Rubinfeld, Daniel L. 2018. *Microeconomics* (8th Ed.), Pearson

Publicly Available Document

- "Horizontal Merger Guidelines - August 19, 2010," U.S. Department of Justice and the Federal Trade Commission, accessed on July 27, 2022, available at

<https://www.justice.gov/atr/horizontal-merger-guidelines-08192010> (Accessed September 2, 2022)

Bates Stamped Documents

- ROSS-003390563
- TR-0526552
- TR-0179885
- TR-0179843
- TR-0179838
- TR-0179830
- TR-0044730

EXHIBIT AM

CONFIDENTIAL – ATTORNEYS’ EYES ONLY

**EXPERT REPORT
OF
ALAN J. COX, PH.D.**

In Connection with

*Thomson Reuters Enterprise Centre GmbH and West Publishing Corporation, v. Ross
Intelligence Inc.*

Case No. 20-613-LPS

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

September 20, 2022

CONFIDENTIAL—ATTORNEYS’ EYES ONLY

NATIONAL ECONOMIC RESEARCH ASSOCIATES

FOUR EMBARCADERO CENTER, SUITE 400
SAN FRANCISCO, CA 94111

TELEPHONE: 415.291.1000 FACSIMILE: 415.291.1020

**Expert Report of
Alan J. Cox, Ph.D.**

TABLE OF CONTENTS

I.	QUALIFICATIONS	1
II.	CONFIDENTIALITY.....	1
III.	BACKGROUND AND ASSIGNMENT	2
IV.	SUMMARY OF OPINIONS	3
V.	FACTS AND DATA CONSIDERED IN FORMING MY OPINIONS	4

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

XI. CONCLUSION..... 32

EXHIBITS

APPENDIX A. Resume of Alan J. Cox

APPENDIX B. Documents Reviewed

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

I. QUALIFICATIONS

1. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

2. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

II. CONFIDENTIALITY

3. [REDACTED]
[REDACTED]
[REDACTED]

¹ Expert Report of Alan J. Cox, Ph.D., August 1, 2022 (herein, “Cox Opening Report”).

² Expert Rebuttal Report of Alan J. Cox, Ph.D., September 6, 2022 (herein, “Cox Rebuttal Report”).

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

III. BACKGROUND AND ASSIGNMENT

4. [REDACTED]
5. [REDACTED]
6. [REDACTED]

³ Plaintiffs and Counterdefendants Thomson Reuters Enterprise Centre GmbH and West Publishing Corporation’s Complaint (herein, “Complaint”), ¶ 1.

⁴ Complaint, ¶¶ 49–53.

⁵ Plaintiffs and Counterdefendants Thomson Reuters Enterprise Centre GmbH and West Publishing Corporation’s Third Supplemental Response and Objections to Defendant and Counterclaimant ROSS Intelligence Inc.’s Interrogatory No. 1 (herein, “Third Supplemental Response to Interrogatory No. 1”), p. 30. See also *id.*, p. 68

[REDACTED] (see TR-0179838-842 at -840; TR-0179885).

[REDACTED] (see TR-0179830-837 at -830; TR-0179838-842; TR-0179843; TR-0044730).

IV. SUMMARY OF OPINIONS

7. [REDACTED]

[REDACTED]

- [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

- [REDACTED]
[REDACTED]
[REDACTED]

- [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

- [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

⁶ TR-0035897-908 at -899.

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

•

[REDACTED]

•

[REDACTED]

V. FACTS AND DATA CONSIDERED IN FORMING MY OPINIONS

8.

[REDACTED]

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

- [REDACTED]
- [REDACTED]
9. [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
10. [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
11. [REDACTED]
- [REDACTED]
- [REDACTED]

⁷ Cotter, Thomas F. 2008. “Fair Use and Copyright Overenforcement,” *Iowa Law Review* 93: 1271-1318.

⁸ Lemley, Mark A., and Bryan Casey. 2020. “Fair Learning,” *Texas Law Review* 99: 743-785.

⁹ Allen, Mark A., Hall, Robert E., and Lazera, Victoria A. 2011. “Reference Guide on Estimation of Economic Damages,” in *Reference Manual on Scientific Evidence*, Committee on the Development of the Third Edition of the Reference Manual on Scientific Evidence; Federal Judicial Center; National Research Council, pp. 425-502, at p. 432 (“In almost all cases, the damages expert proceeds on the hypothesis that the defendant committed the harmful act and that the act was unlawful. Accordingly, throughout this discussion, we assume that the plaintiff is entitled to compensation for losses sustained from a harmful act of the defendant. The characterization of the harmful event begins with a clear statement of what occurred. The characterization also will include a description of the defendant’s proper actions in place of its unlawful actions and a statement about the economic situation absent the wrongdoing, with the defendant’s proper actions replacing the unlawful ones (the but-for scenario). Damages measurement then determines the plaintiff’s hypothetical value in the but-for scenario. Economic damages are the difference between that value and the actual value that the plaintiff achieved.”).

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

[REDACTED]

12. [REDACTED]

[REDACTED]

13. [REDACTED]

14. [REDACTED]

[REDACTED]

15. [REDACTED]

[REDACTED]

¹⁰ Nimmer, Melville B. 2022. *Nimmer on Copyright*, LexisNexis (herein, “Nimmer on Copyright”), § 14.03.

¹¹ See also Evans, Elizabeth A., Phil J. Innes, and Daniel G. Lentz. 2017. “Damages Theories and Causation Issues,” in *Litigation Services Handbook: The Role of the Financial Expert*, pp. 1-53, at p. 3. (“The law follows logic. It requires that the plaintiff prove more than correlation to establish causation.” Citing *Craig v. Oakwood Hosp.*, 684 N.W.2d 296, 312 (Mich. 2004); *Schafersman v. Agland Coop*, 631 N.W.2d 862, 871 (Neb. 2001).)

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

[REDACTED]

16. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED] [REDACTED] [REDACTED]

17. [REDACTED]
[REDACTED] [REDACTED]
[REDACTED]

[REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED] [REDACTED]

18. [REDACTED]
[REDACTED]

¹² American Law Institute. 1979. *Restatement of the Law, Second, Torts 2d*, American Law Institute Publishers (herein, “Restatement (Second) of Torts”), § 774A.

¹³ See Expert Report of James E. Malackowski, August 1, 2022 (herein, “Malackowski Report”), p. 44, n. 264.

¹⁴ Restatement (Second) of Torts, § 766.

¹⁵ Interestingly, also at 27, the court in *Great American* found that the plaintiff failed to satisfy “its burden of proof as to causation in connection with its claim for [lost profits] damages.” [REDACTED]

¹⁶ Malackowski Report, p. 44, n. 264.

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

(1) [REDACTED]

(a) [REDACTED]

(b) [REDACTED]

(c) [REDACTED]

19. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

D. [REDACTED]

20. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

21. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

¹⁷ Malackowski Report, p. 5.

¹⁸ [REDACTED]

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

[REDACTED]

22. [REDACTED]

[REDACTED]

23. [REDACTED]

24. [REDACTED]

¹⁹ Restatement (Second) of Torts, § 774A.

²⁰ Malackowski Report, p. 49 [REDACTED]

²¹ [REDACTED]

²² Malackowski Report, p. 5.

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

[REDACTED]

25. [REDACTED]

26. [REDACTED]

27. [REDACTED]

[REDACTED]

28. [REDACTED]

²³ Malackowski Report, p. 52.

²⁴ Malackowski Report, p. 52.

²⁵ Malackowski Report, pp. 55-57.

²⁶ Malackowski Report, p. 55.

²⁷ Malackowski Report, p. 57, Schedule 1.0, Schedule 1.1.

29.

Category	Value
1	[REDACTED]
2	[REDACTED]
3	[REDACTED]
4	[REDACTED]
5	[REDACTED]
6	[REDACTED]
7	[REDACTED]
8	[REDACTED]
9	[REDACTED]
10	[REDACTED]

[illegible]

²⁸ R-LEGALEASE-00101636-642 at -63.

²⁹ Cox Rebuttal Report, ¶¶ 32-40. [REDACTED]

[illegible][illegible]

³⁰ Cox Rebuttal Report, ¶¶ 17-31.

³¹ As I discuss below, [REDACTED]

³² Further, [REDACTED] (Malackowski Report, p. 51).

³³ See, for example, Pindyck, Robert S., and Rubinfeld, Daniel L. 2018. *Microeconomics*, 8th ed., Pearson.

³⁴ Glazer, Amihai, and Hassin, Refael. 1982. "On the Economics of Subscriptions," *European Economic Review* 19: 343-356.

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

33.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

34.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

35.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

³⁵ Expert Report of Dr. Jonathan L. Krein, August 1, 2022 (herein, “Krein Report”).

³⁶ [REDACTED] See Cox Rebuttal Report, Exhibit 1.

³⁷ Krein Report, p. 81.

³⁸ See Exhibit 1.1.

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

[REDACTED]

36. [REDACTED]

[REDACTED]

37. [REDACTED]

38. [REDACTED]

³⁹ TR-0836004.xlsx, [REDACTED]

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

[REDACTED]

39. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

40. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

41. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

⁴⁰ See Exhibit 2.1.

⁴¹ Alternatively, [REDACTED]
[REDACTED] See Exhibit 2.4.

⁴² ROSS-003382388.

⁴³ See Exhibit 1 and Exhibit 2.

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

42. [REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]
[REDACTED]

43. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

44. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

45. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

44 [REDACTED]
[REDACTED]

⁴⁵ Third Supplemental Response to Interrogatory No. 1, pp. 14-15.

⁴⁶ Hook, Peter A., and Mattson, Kurt R. 2017. “Surprising Differences: An Empirical Analysis of LexisNexis and West Headnotes in the Written Opinions of the 2009 Supreme Court Term.” *Library Law Journal* 109: 557-629, at p. 570 (“The range of the number of headnotes assigned by West was 1 to 36.”); Deposition of Laurie Oliver, 35:25-36:5 [REDACTED]
[REDACTED]); Deposition of Erik Lindberg, 119:17 –
120:2 [REDACTED]
[REDACTED]

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

[REDACTED]

46. [REDACTED]

47. [REDACTED]

48. [REDACTED]

⁴⁷ Malackowski Report, pp. 50-51

[REDACTED]; See also TR-0894151; Deposition of Mark Hoffman, 23:25 – 25:3.

⁴⁸ Malackowski Report, p. 22

[REDACTED]

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

[REDACTED]

49. [REDACTED]

50. [REDACTED]

[REDACTED]

51. [REDACTED]

52. [REDACTED]

⁴⁹ Malackowski Report, p. 49 [REDACTED]

⁵⁰ Plaintiffs and Counterdefendants Thomson Reuters Enterprise Center GmbH and West Publishing Corporation’s Second Supplemental Responses and Objections to Defendant and Counterclaimant ROSS Intelligence Inc.’s Interrogatory No. 21, p. 18 [REDACTED] See also Complaint, ¶ 3 [REDACTED]

⁵¹ Malackowski Report, p. 5.

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

[REDACTED]

[REDACTED]

53. [REDACTED]

[REDACTED]

54. [REDACTED]

[REDACTED]

⁵² Malackowski Report, p. 55.

⁵³ Malackowski Report, p. 58.

⁵⁴ See for example Malackowski Report, p. 31

[REDACTED] See also, Complaint, ¶ 37.

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

[REDACTED]

55. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

56. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

57. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

⁵⁵ Malackowski Report, p. 58.

⁵⁶ Malackowski Report, p. 34 [REDACTED] See also ROSS Board Discussion Materials, June 28, 2018, ROSS-009722263-299 at -264.

⁵⁷ Malackowski Report, p. 34, citing ROSS Board Discussion Materials, June 28, 2018, ROSS-009722263-299 at -264.

⁵⁸ See **Exhibit 3.3**.

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

58. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED] [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED] [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

59. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED] [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED] [REDACTED]

60. [REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]
[REDACTED]

⁶⁰ Deposition of Sean Shafik, 76:16-78:12.

⁶¹ See Exhibit 3.1.

⁶² See Exhibit 3.4.

⁶³ See Exhibit 3.2.

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

[REDACTED]

61. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

62. [REDACTED]

[REDACTED]

[REDACTED]

⁶⁴ [REDACTED] (see for example Deposition of Edward Walters, 56:11–57:1).

⁶⁵ Complaint, ¶ 37.

⁶⁶ Malackowski Report, p. 34.

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

[REDACTED]

63. [REDACTED]

[REDACTED]

64. [REDACTED]

65. [REDACTED]

⁶⁷ Rudich, Eric A., Lewis M. Koppel, and Michael P. Padden. 2014. “Post-Uniloc Reasonable Royalty Damages: What to Do Now and How to Present It to the Jury?” *Landslide* 6: 42-47, at p. 42 (“It is useful to go back to basics and review the three approaches that underlie all valuation work – the market approach, the income approach, and the cost approach. In the market approach, an asset is valued using the values that have been established by transactions for other similar assets. The income approach values an asset by estimating the income it is expected to generate for its owner over its useful life. In the cost approach, an asset is valued at what it would cost to replace it with a similar asset.”).

⁶⁸ Cox Opening Report, ¶ 71; Third Supplemental Response to Interrogatory No. 1, p. 70-71 and Exhibits A and B; Krein Report, Appendix C. [REDACTED] (see Rebuttal Report of Barbara Frederikson-Cross, ¶ 15). [REDACTED]

⁶⁹ Malackowski Report, p. 6. [REDACTED] (see Malackowski Report, p. 6).

⁷⁰ [REDACTED]

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

[REDACTED]

66. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

67. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

68. [REDACTED]

[REDACTED]

[REDACTED]

⁷¹ Cox Opening Report, ¶ 71.

⁷² [REDACTED]

⁷³ “Weighted Average Cost of Capital for Thomson Reuters Corp., 2018,” *Bloomberg* (Accessed September 13, 2022).

⁷⁴ [REDACTED]

⁷⁵ “Thomson Reuters Fact Book 2019”, Thomson Reuters, p. 7. Available at <https://ir.thomsonreuters.com/static-files/b2175d6d-7c92-4a62-9e7a-3cae2593933d> (Accessed September 6, 2022).

⁷⁶ Jones, Charles I., and Tonetti, Christopher. 2020. “Nonrivalry and the Economics of Data,” *American Economic Review* 110: 2819-2858 (“The starting point for our analysis is the observation that data is nonrival. That is, at a technological level, data is infinitely usable. Most goods in economics are rival: if a person consumes a kilogram of rice or an hour of an accountant’s

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

[REDACTED]

C. [REDACTED]

69. [REDACTED]

70. [REDACTED]

71. [REDACTED]

72. [REDACTED]

time, some resource with a positive opportunity cost is used up. In contrast, existing data can be used by any number of firms or people simultaneously, without being diminished.”).

⁷⁷ Deposition of Andrew Martens, 224:12-14.

⁷⁸ **Exhibit 4.1**; TR-0359130; TR-0359401.

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

[REDACTED]

73. [REDACTED]

74. [REDACTED]

[REDACTED]

75. [REDACTED]

⁷⁹ Malackowski Report, p. 55.

⁸⁰ Malackowski Report, pp. 55-56.

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

[REDACTED]

76. [REDACTED]

77. [REDACTED]

78. [REDACTED]

79. [REDACTED]

⁸¹ “Employer Costs for Employee Compensation – Private Industry Workers”, U.S. Bureau of Labor Statistics. Available at <https://www.bls.gov/web/ecec/ecec-private-dataset.xlsx> (Accessed September 7, 2022).

⁸² Each salary is multiplied by approximately 1.41 (or $1/(1 - 0.298)$) to account for benefits.

⁸³ [REDACTED] This video was referenced in TR-0179885.

⁸⁴ [REDACTED]

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

80. [REDACTED]
[REDACTED]
[REDACTED]

81. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

82. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

83. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

⁸⁵ TR-0908447.

⁸⁶ See **Exhibit 6.2**.

⁸⁷ Black, Ryan C. and Spriggs James F. II. 2013."The Citation and Depreciation of U.S. Supreme Court Precedent," *Journal of Empirical Legal Studies* 10: 325-358. ("Black and Spriggs (2013)")

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

[REDACTED]

84. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

85. [REDACTED]

[REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

86. [REDACTED]
[REDACTED]

⁸⁸ See **Exhibit 6.2**. I exclude infrastructure costs as they are not attributable to the cost of developing headnotes.

⁸⁹ See **Exhibit 6.1**.

⁹⁰ “Glossary of Statistical Terms,” OECD. Available at <https://stats.oecd.org/glossary/detail.asp?ID=2826#:~:text=Definition%3A,the%20%E2%80%9Ccapital%20service%20price%22> (Accessed September 16, 2022).

⁹¹ Versions of this formula can be found in several sources including the paper seminal paper Hall, Robert E., and Dale W. Jorgenson. 1967. “Tax policy and investment behavior,” *American Economic Review* 57: 391-414.

[REDACTED]

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

[REDACTED]

87. [REDACTED]

88. [REDACTED]

89. [REDACTED]

⁹² Black and Spriggs (2013), pp. 325-326 (“An enduring piece of legal wisdom contents that the informational value of court opinions depreciates as they age. As society evolves and law changes due to economic, social, and political developments, the extent to which a precedent remains pertinent for deciding legal disputes diminishes. As judges analogically reason their way to conclusions, older cases are less likely to contain issues, principles and reasoning appropriate for contemporary legal problems.”).

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

90. [REDACTED]

91. [REDACTED]

[REDACTED]

92. [REDACTED]

⁹³ Nimmer on Copyright, § 14.03 (footnotes omitted) (“The fact that a defendant’s infringing products represent 2 percent of its total inventory does not necessarily mean that its gross revenues attributable to infringement equal 2 percent of its gross revenues from the sales of all of its products. Rather, it is necessary to attribute profits directly to the infringement: “If General Motors were to steal your copyright and put it in a sales brochure, you could not just put a copy of General Motors’ corporate income tax return in the record and rest your case for an award of infringer’s profits.” [citing *Taylor v. Meirick*,

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

[REDACTED]

XI. [REDACTED]

93. [REDACTED]

94. [REDACTED]

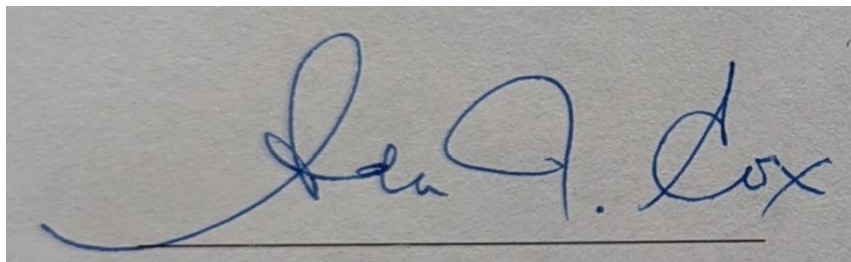
95. [REDACTED]

96. [REDACTED]

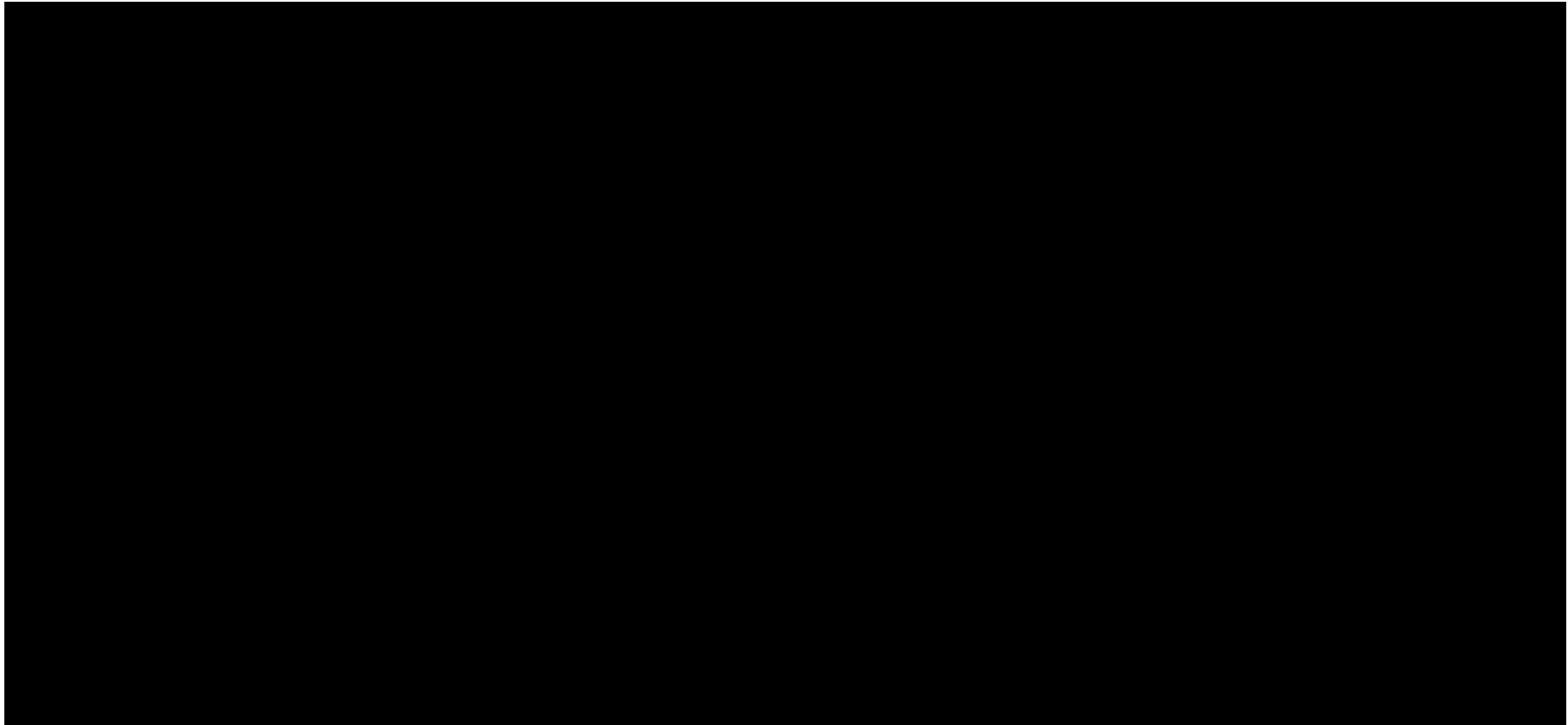
712 F.2d 1112 (7th Cir. 1983)] . . . The reason that proof via tax returns would fail is that actionable damages must be direct, rather than remote, and that an appropriate apportionment must be made between revenue attributable to infringement and other revenue.”).

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

[REDACTED]

A handwritten signature in blue ink on a light gray background. The signature is written in a cursive style and appears to read "Alan J. Cox". The signature is positioned above a thin horizontal line.

Alan J. Cox

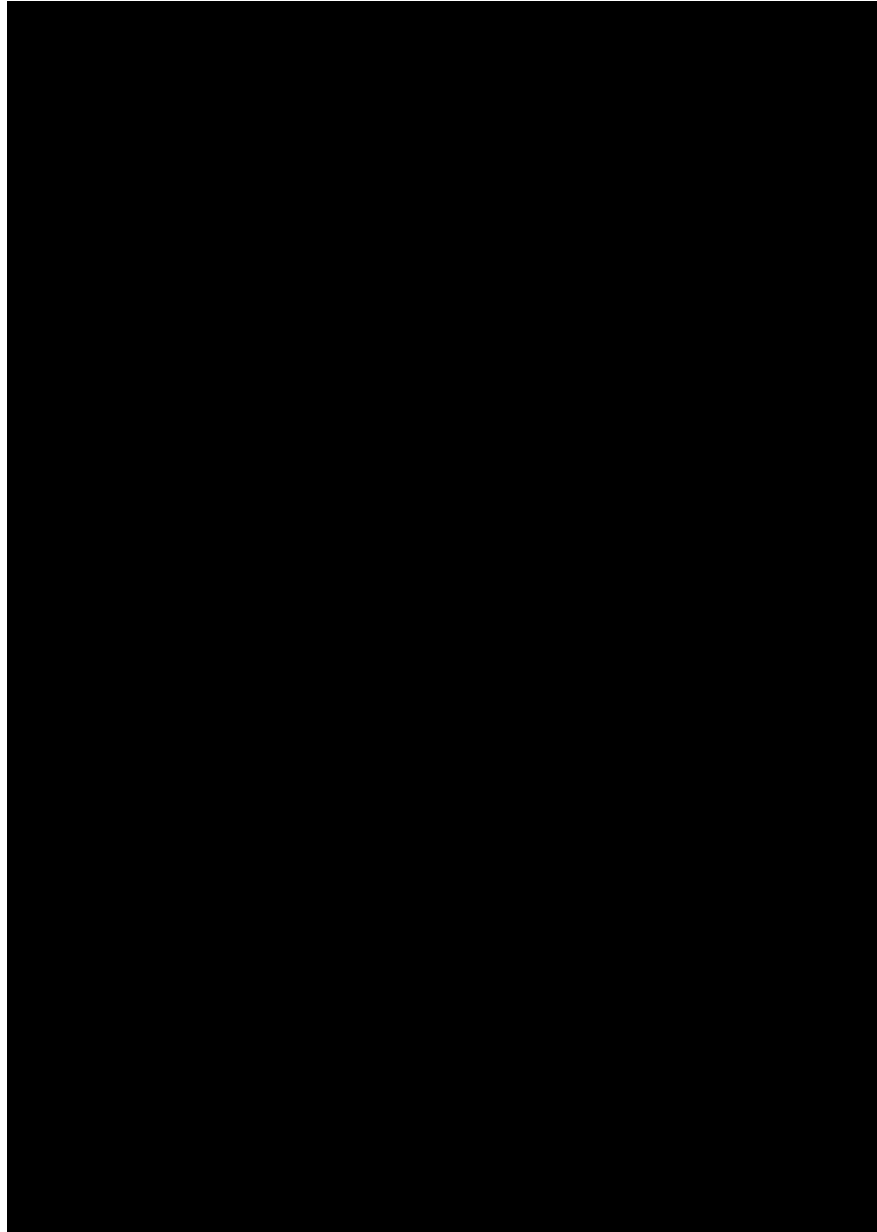


Notes:

[Redacted text]

Sources:

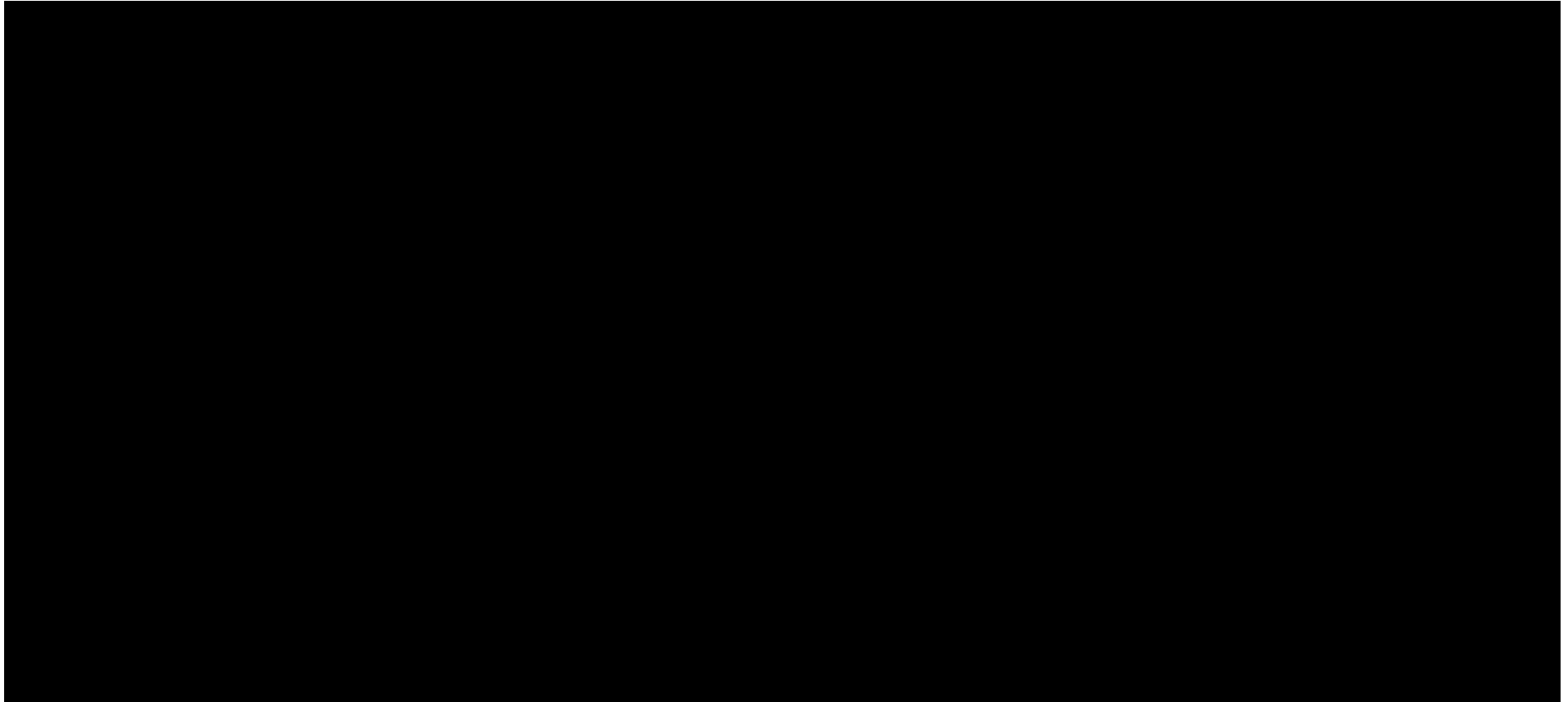
[Redacted text]



Notes:

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

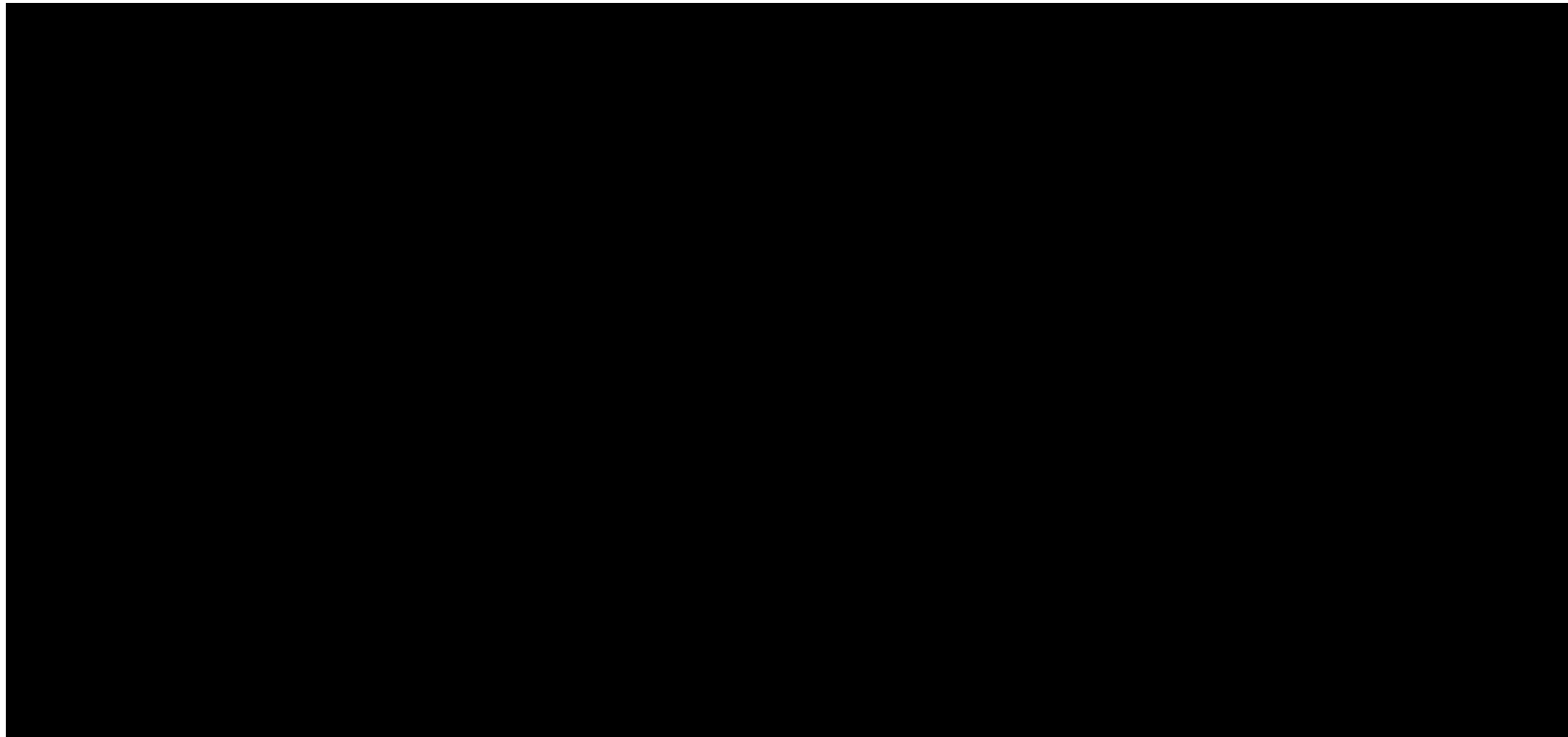
Sources: LEGALEASE-00018036; LEGALEASE-00030617; LEGALEASE-00043224;
LEGALEASE-00123981; LEGALEASE-00132781; LEGALEASE-00132970;
LEGALEASE-00139081; LEGALEASE-00139169; LEGALEASE-00166082; ROSS-
000000001; ROSS-000000003; ROSS-000000005; ROSS-000000007; ROSS-
000000008; ROSS-000000094; ROSS-000000096; ROSS-000000294; ROSS-
000000296; ROSS-003293551; ROSS-003294930; ROSS-003296510; ROSS-
003297673; ROSS-003298574; ROSS-003300771; ROSS-003316272; ROSS-
003316274; ROSS-003316299; ROSS-003317686; ROSS-003317702; ROSS-
003320846; ROSS-003320863.



Notes

[REDACTED]

Sources: TR-0836004; FASTCASE_090487; FASTCASE_090429; FASTCASE_085445; TR-0002846; Plaintiffs and Counterdefendant's Second Supplemental Responses and Objections to Defendant and Counterclaimant's Interrogatory No. 21; Expert Report of James E. Malackowski.



Notes: 1

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Sources: TR-0836004 at tab "

[REDACTED]

[REDACTED]

Notes:

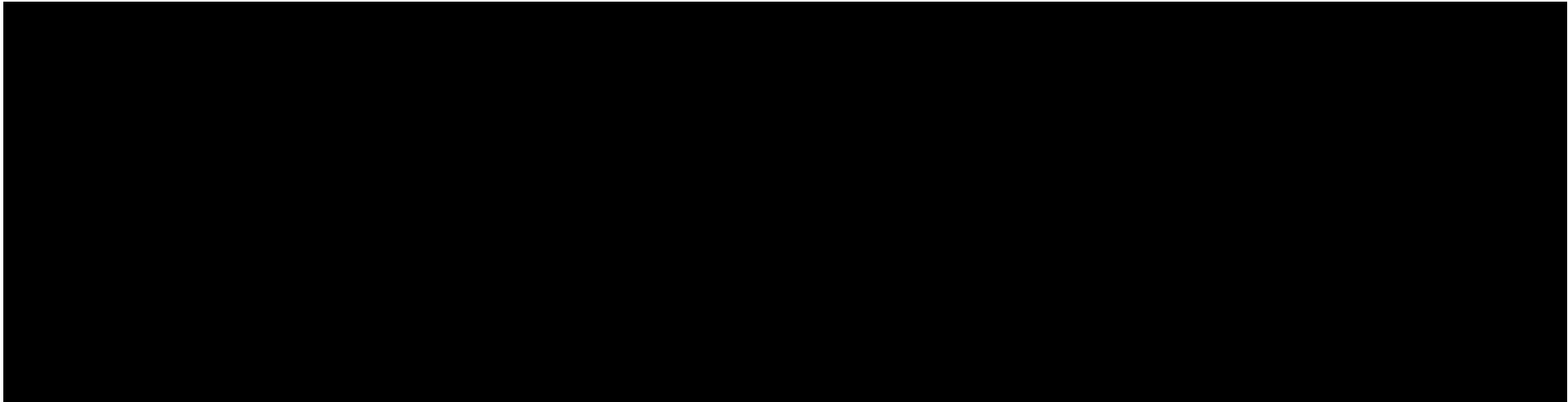
Sources: TR-0836004; FASTCASE_090487; FASTCASE_090429; FASTCASE_085445; TR-0002846; Plaintiffs and Counterdefendant's Second Supplemental Responses and Objections to Defendant and Counterclaimant's Interrogatory No. 21; Expert Report of James E. Malackowski.



Notes:

[Redacted text]

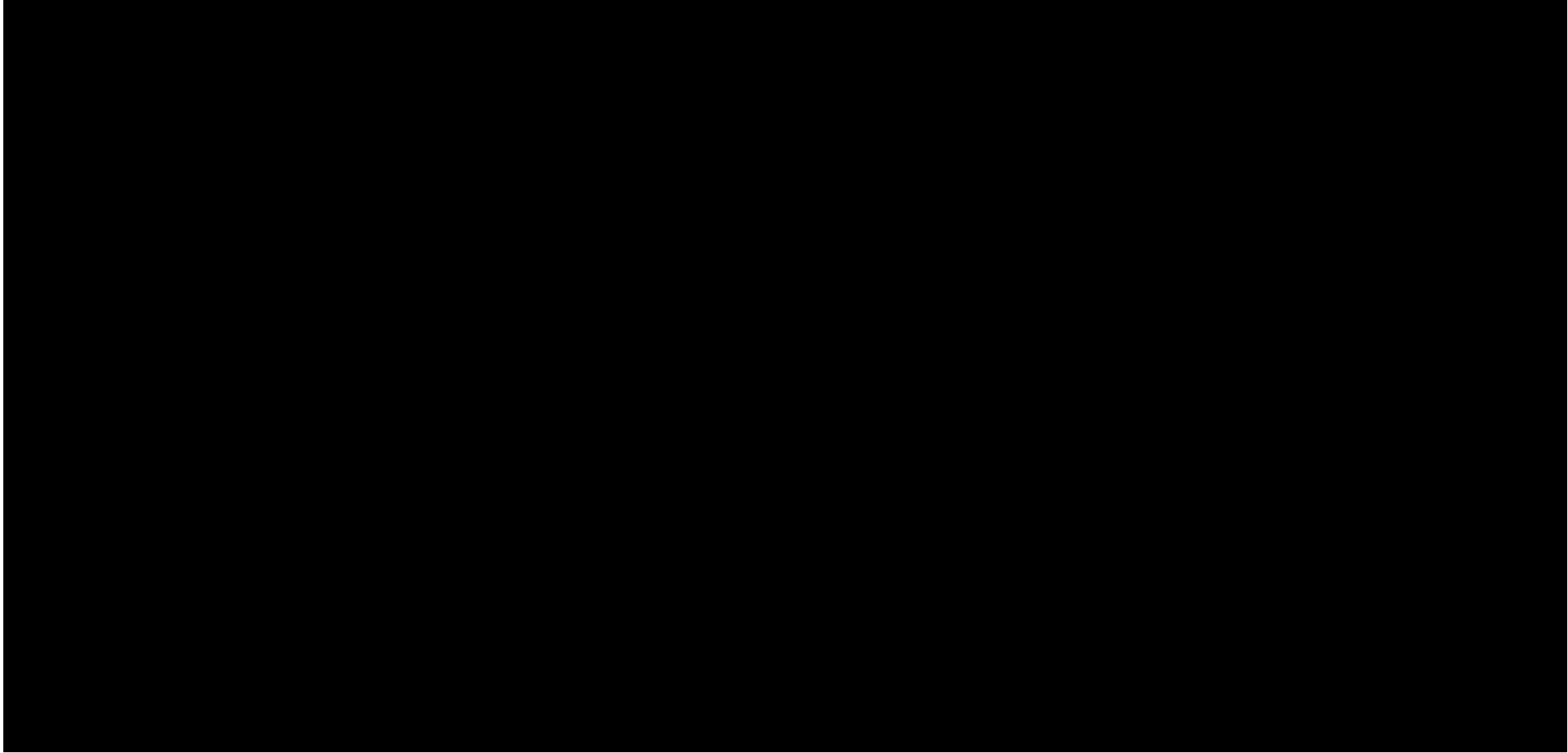
Sources: TR-0836004; Expert Report of James E. Malackowski.



Notes:

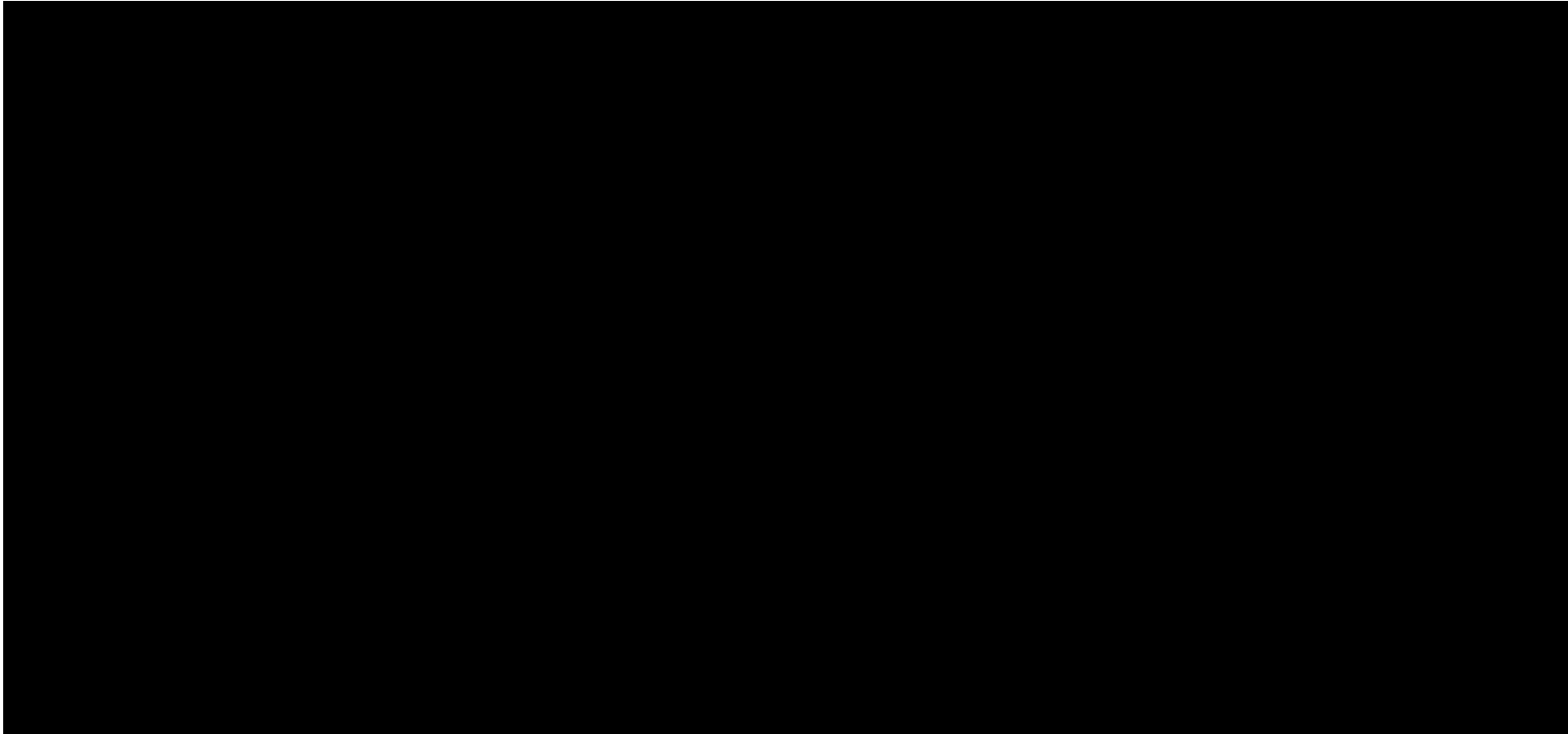
[REDACTED]

Sources: TR-0836004; FASTCASE_090487; FASTCASE_090429; FASTCASE_085445; TR-0002846; Plaintiffs and Counterdefendant's Second Supplemental Responses and Objections to Defendant and Counterclaimant's Interrogatory No. 21; Expert Report of James E. Malackowski.



Notes: [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

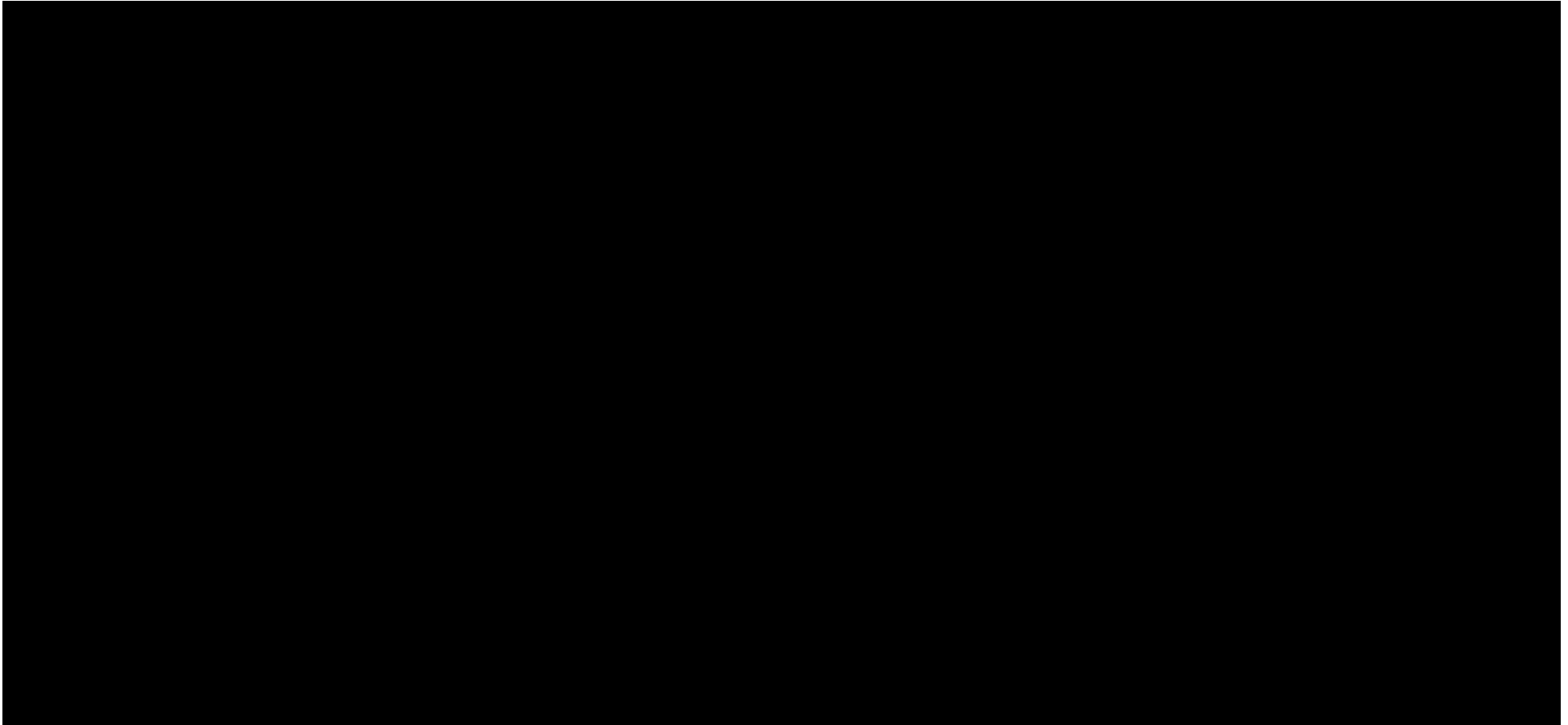
Sources: TR-0836004; FASTCASE_090487; FASTCASE_090429; FASTCASE_085445; TR-0002846; Plaintiffs and Counterdefendant's Second Supplemental Responses and Objections to Defendant and Counterclaimant's Interrogatory No. 21; Expert Report of James E. Malackowski.



Notes:

[REDACTED]

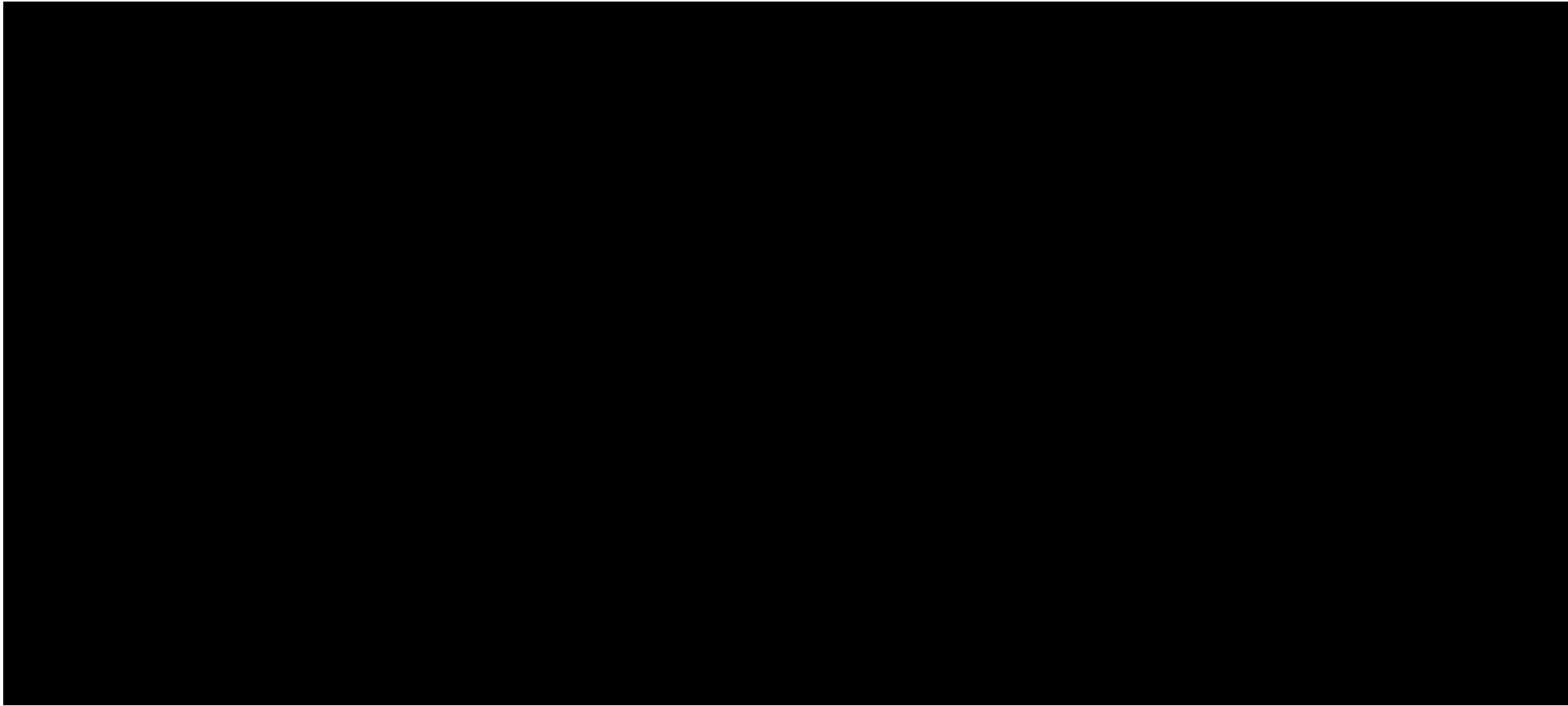
Sources: TR-0836004; FASTCASE_090487; FASTCASE_090429; FASTCASE_085445; TR-0002846; Plaintiffs and Counterdefendant's Second Supplemental Responses and Objections to Defendant and Counterclaimant's Interrogatory No. 21; Expert Report of James E. Malackowski.



Notes

[REDACTED]

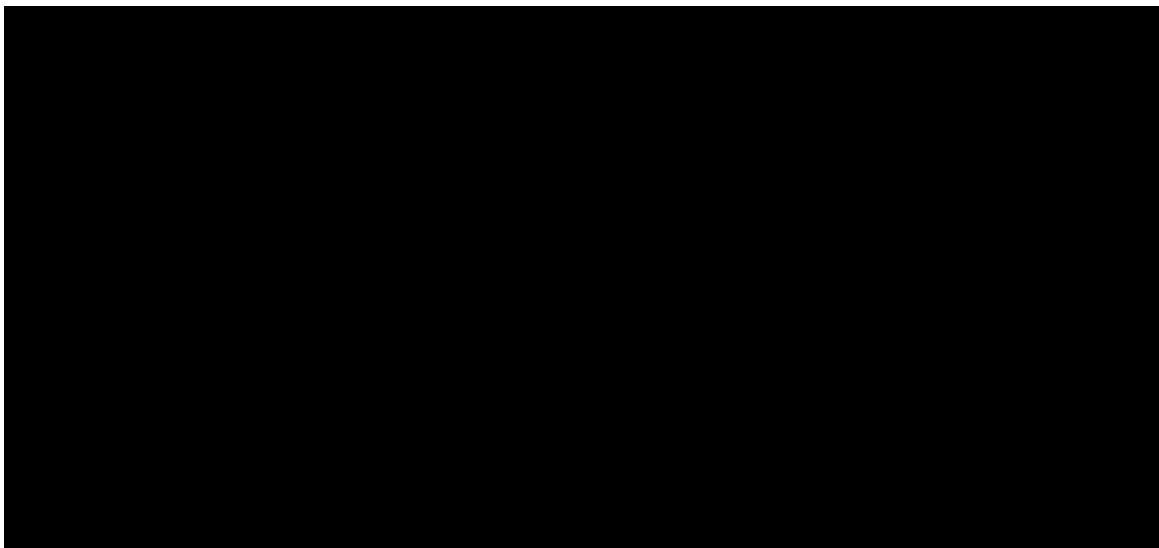
Sources: TR-0836004; FASTCASE_090487; FASTCASE_090429; FASTCASE_085445; TR-0002846; Plaintiffs and Counterdefendant's Second Supplemental Responses and Objections to Defendant and Counterclaimant's Interrogatory No. 21; Expert Report of James E. Malackowski.



Notes:

[REDACTED]

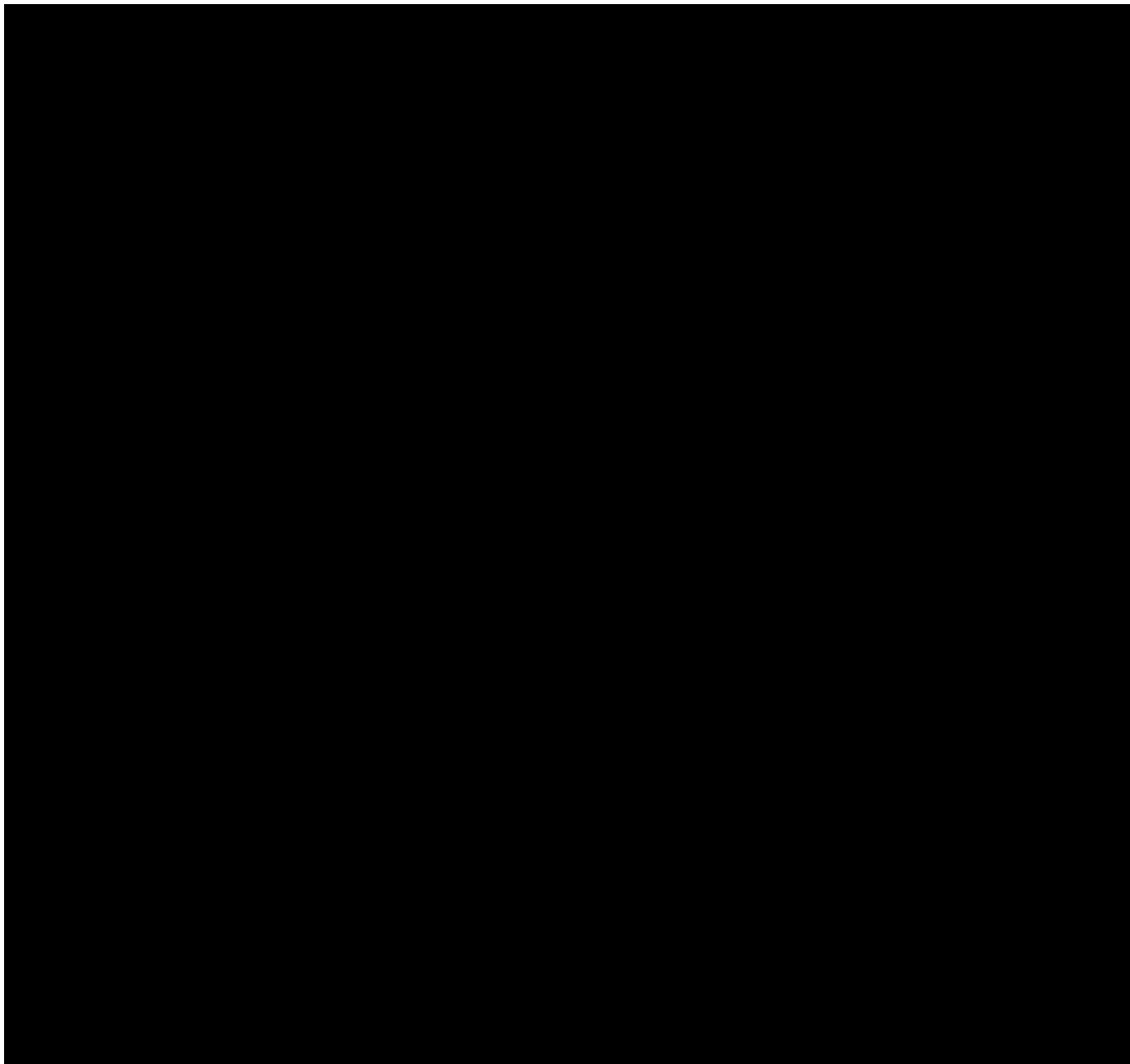
Sources: TR-0836004; FASTCASE_090487; FASTCASE_090429; FASTCASE_085445; TR-0002846; Plaintiffs and Counterdefendant's Second Supplemental Responses and Objections to Defendant and Counterclaimant's Interrogatory No. 21; Expert Report of James E. Malackowski.



Notes: 1 *See* Exhibit 3.1

2 *See* Exhibit 3.2

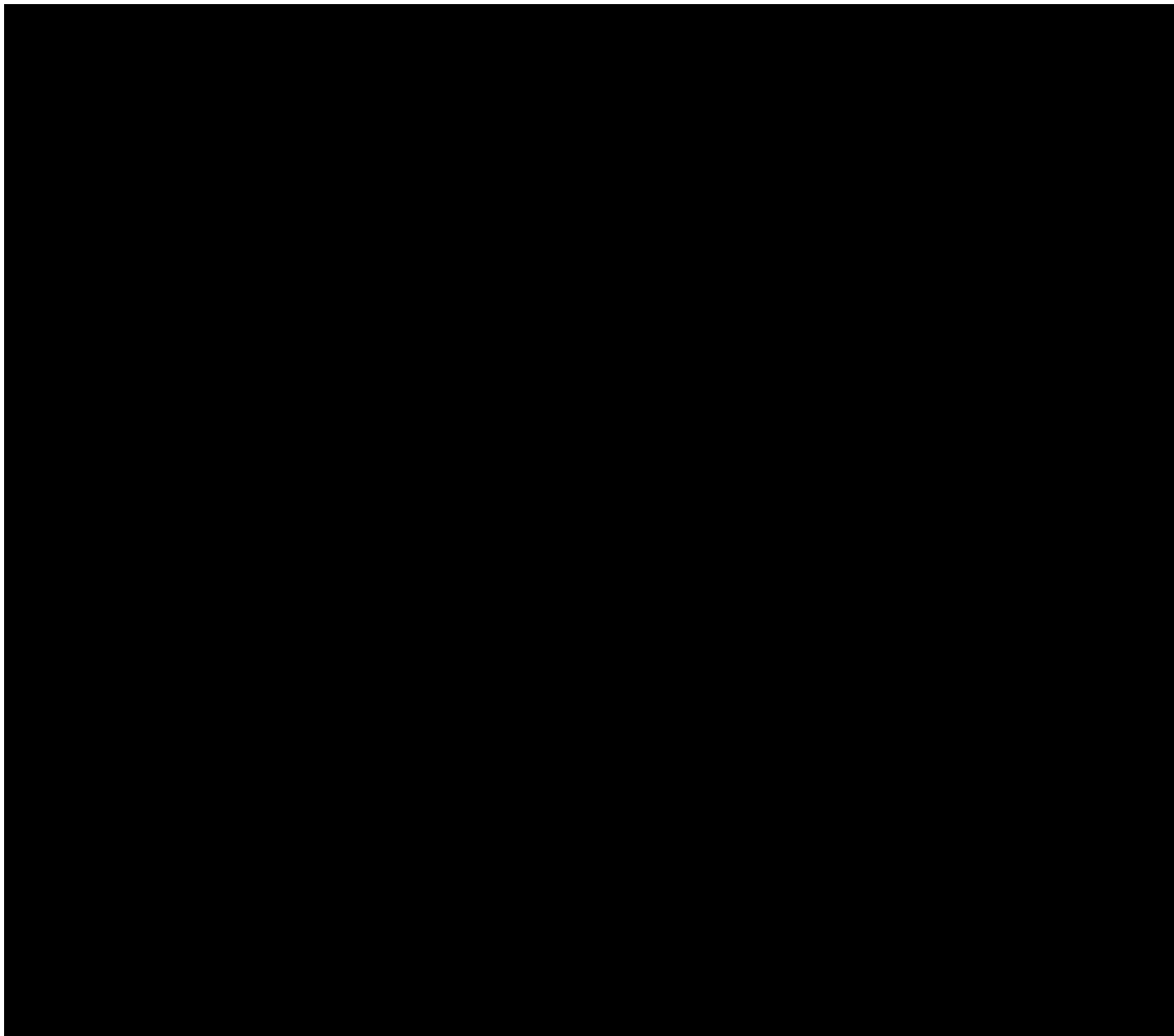
Sources: ROSS-009664862; ROSS-009690394; ROSS-009721062



Notes:

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

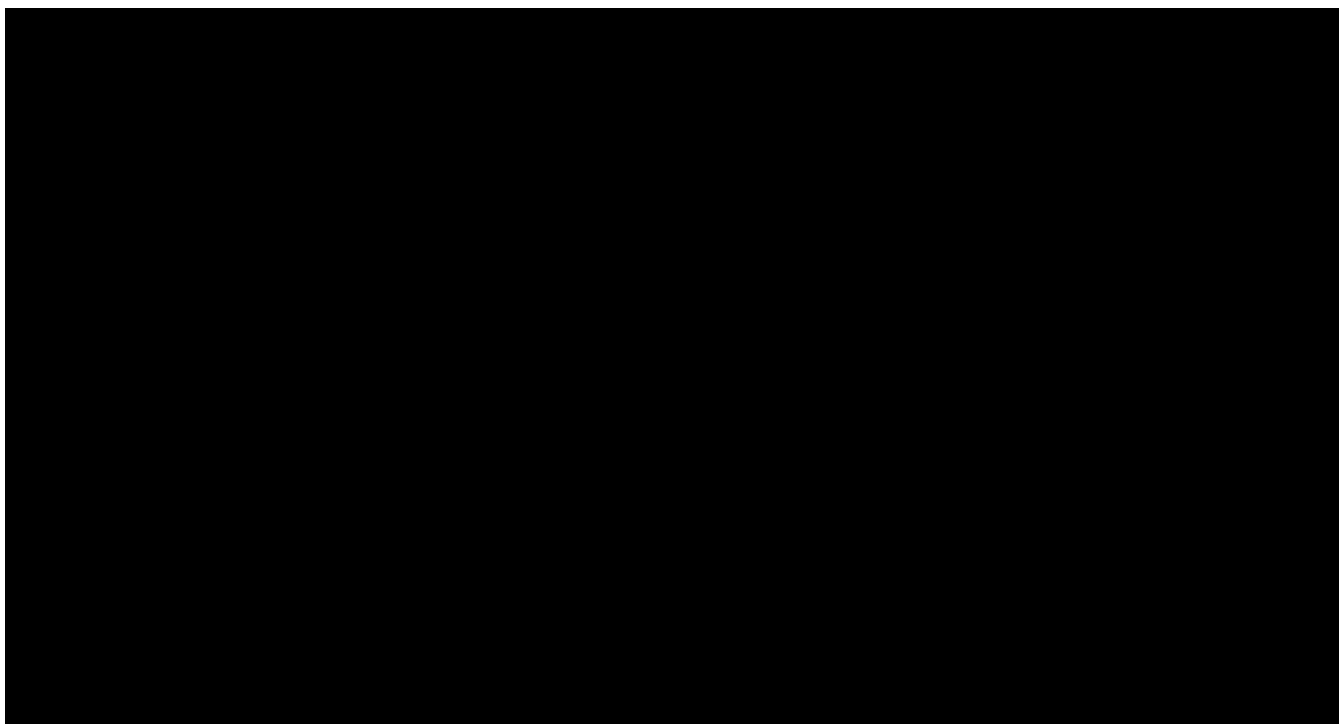
Sources: ROSS-009664862; ROSS-009690394; ROSS-009721062



Notes:

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

Sources: ROSS-009664862; ROSS-009690394; ROSS-009721062



Notes:

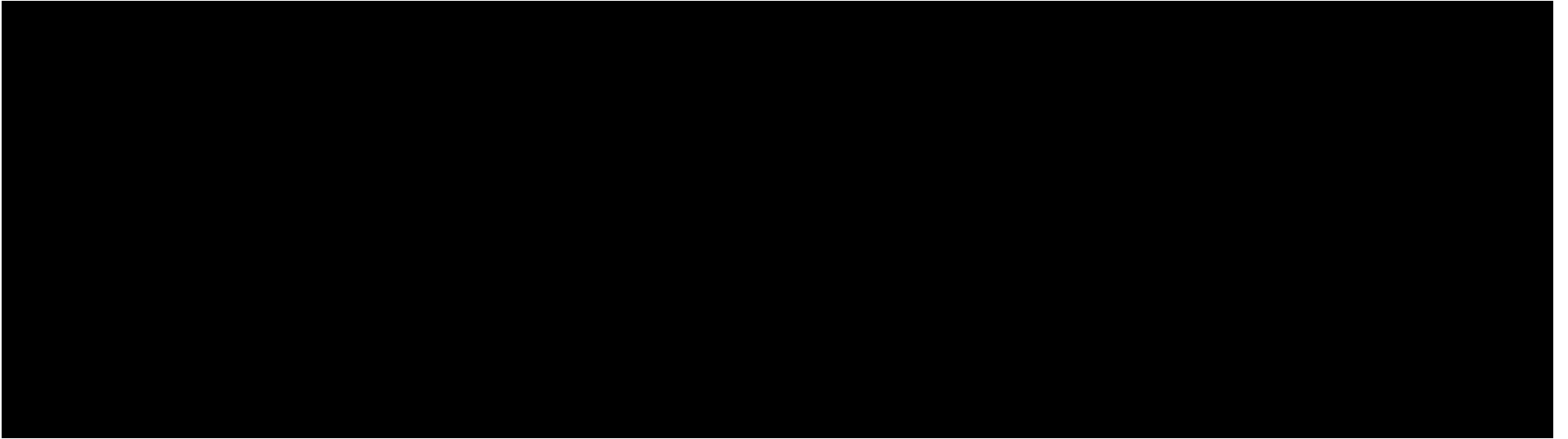
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

Sources: ROSS-009664862

Notes:

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

Sources: ROSS-009664862; ROSS-009690394; ROSS-009721062



Notes:

[REDACTED]

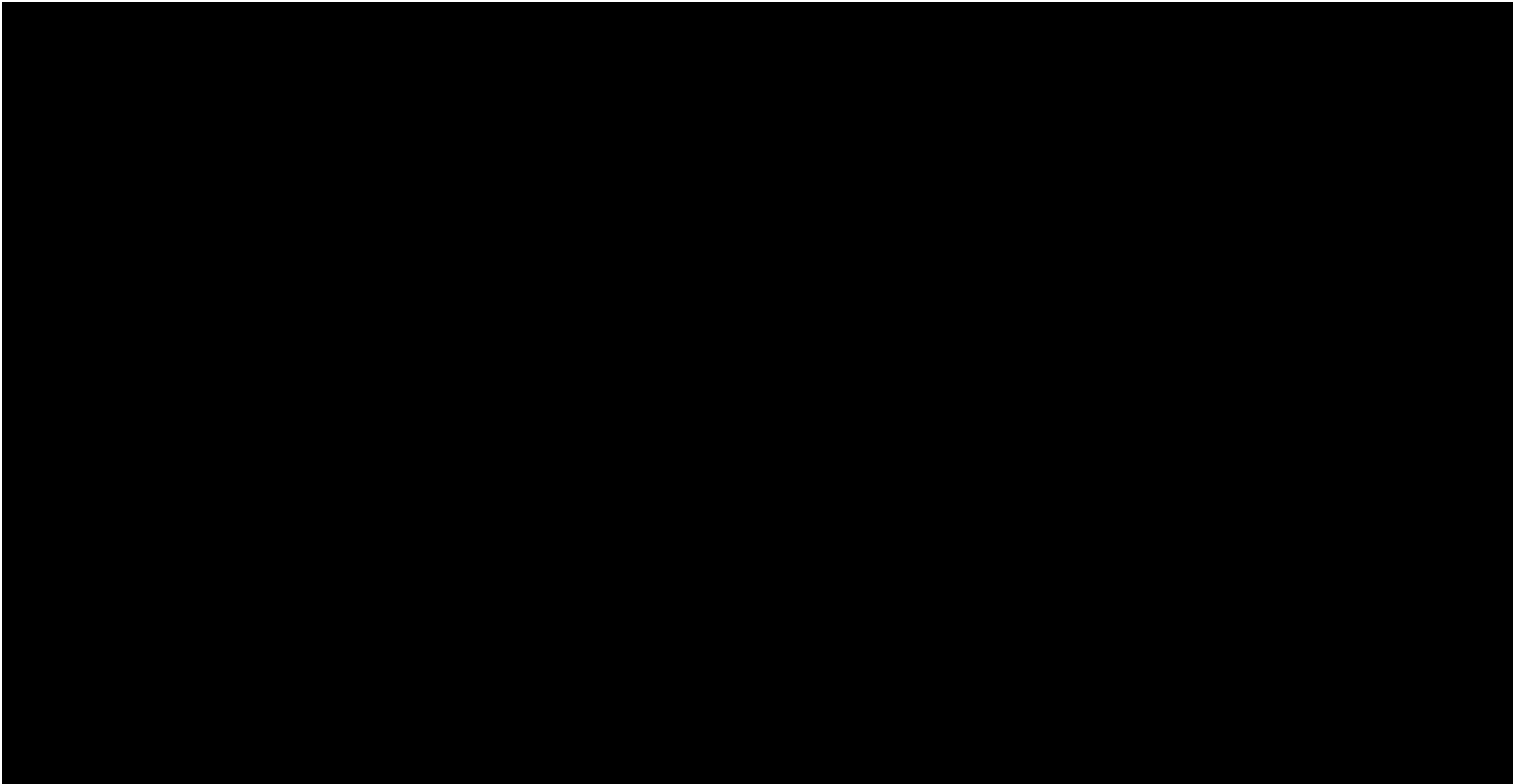
[REDACTED]

[REDACTED]

[REDACTED]

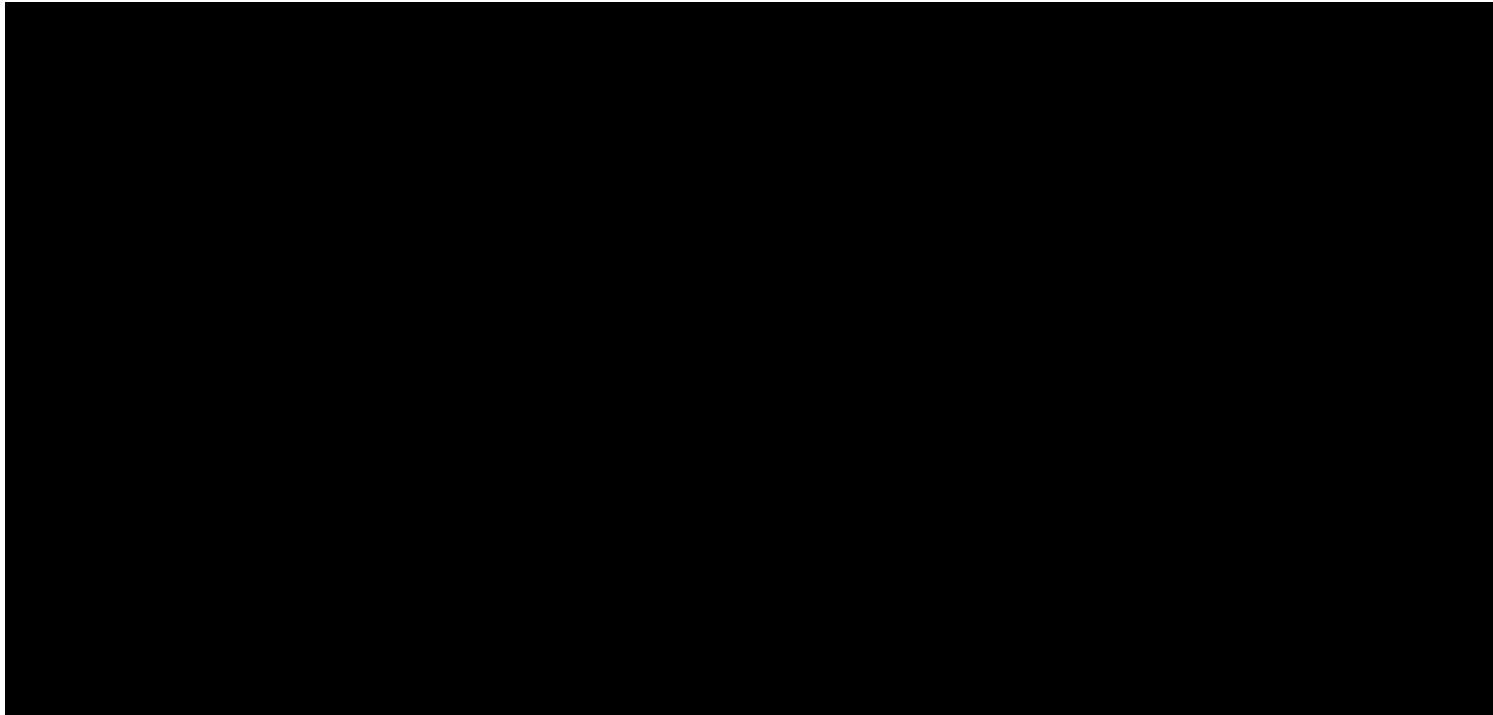
[REDACTED]

Source: TR-0359130.



Note: [Redacted]
[Redacted]
[Redacted]
[Redacted]

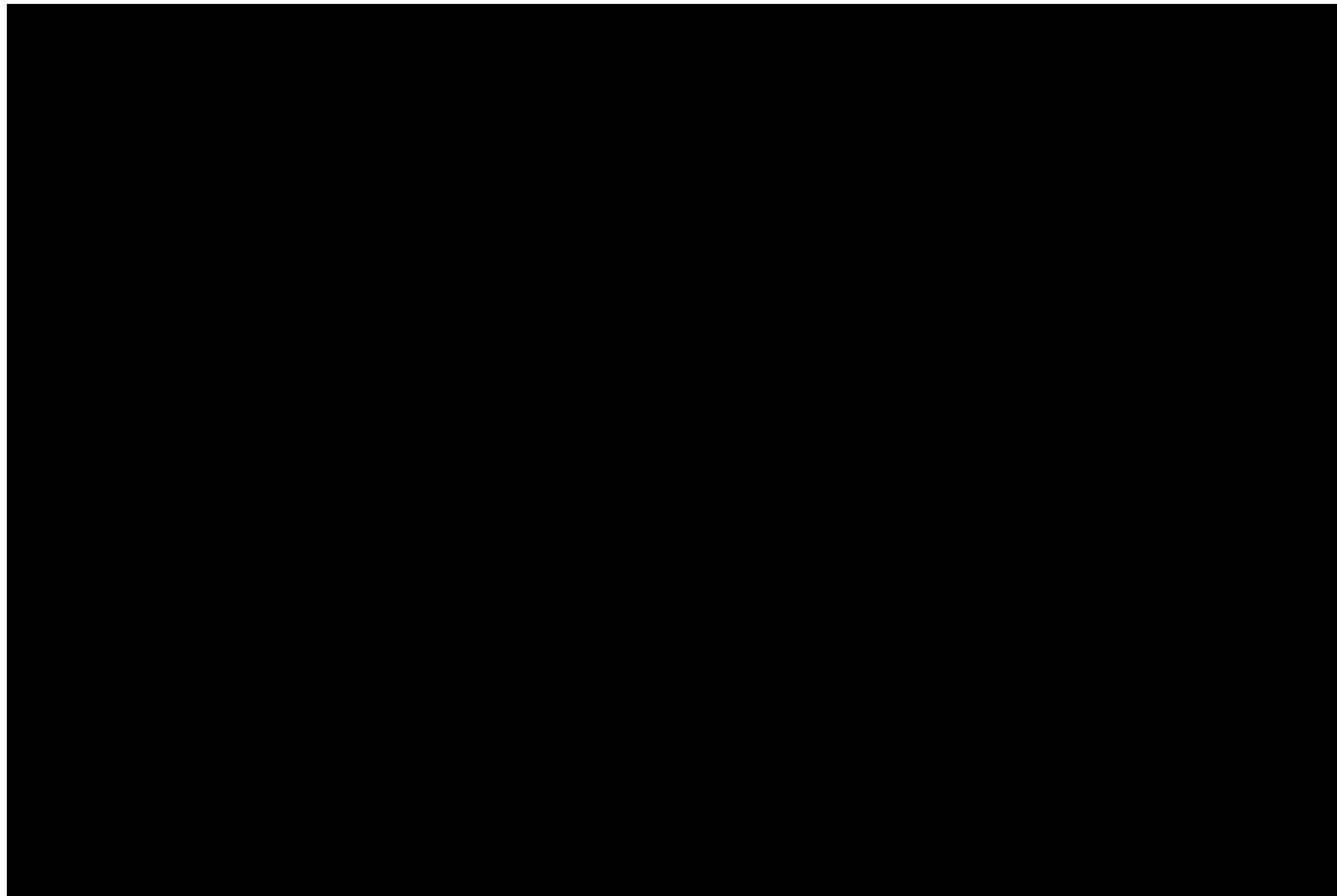
Sources: TR-0359063; TR-0359347; TR-0359401; TR-0359130; TR-0359383; TR-0359458; TR-0359253.



Notes:



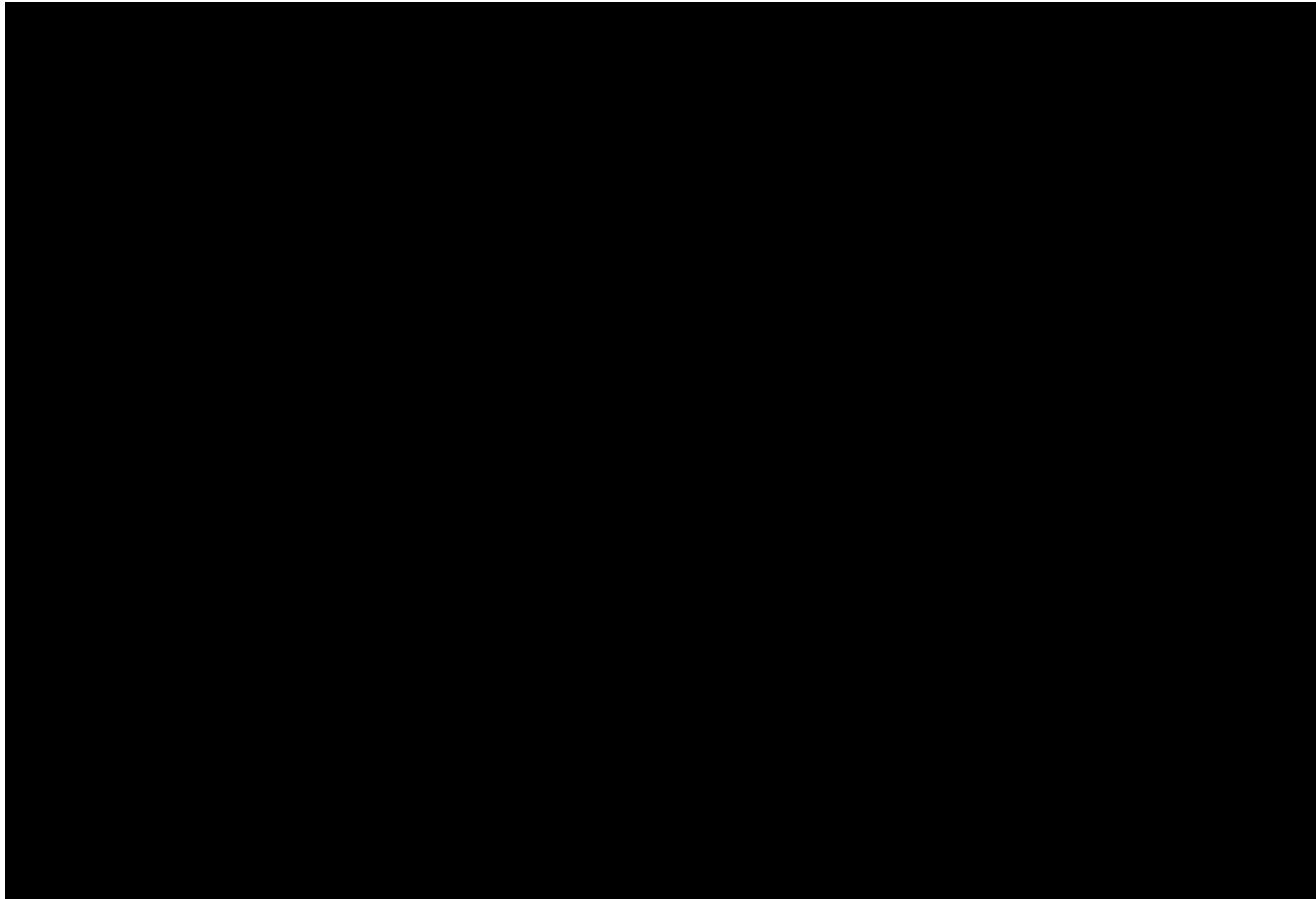
Sources: Expert Report of James E. Malackowski, p. 34; Expert Report of Jonathan L. Krein, ¶¶ 112-114.



Notes:

[Redacted text block]

Sources: Black, Ryan C. and Spriggs James F. II. 2013. "The Citation and Depreciation of U.S. Supreme Court Precedent," Journal of Empirical Legal Studies 10: 325-358; "Weighted Average Cost of Capital for Thomson Reuters Corp., 2018," Bloomberg, accessed Sept. 13, 2022); 2018 Thomson Reuters Annual Report, p. 77, <https://ir.thomsonreuters.com/static-files/b32e0ad2-b992-46da-890d-2a28f21b6a6c> (Accessed September 13, 2022); TR-0908447; Jones, Charles I. 2009. "Investment," available at <https://web.stanford.edu/~chadj/Investment2009-12-21.pdf> (Accessed August 16, 2022); Plaintiffs and Counterdefendant's Second Supplemental Responses and Objections to Interrogatory No. 21



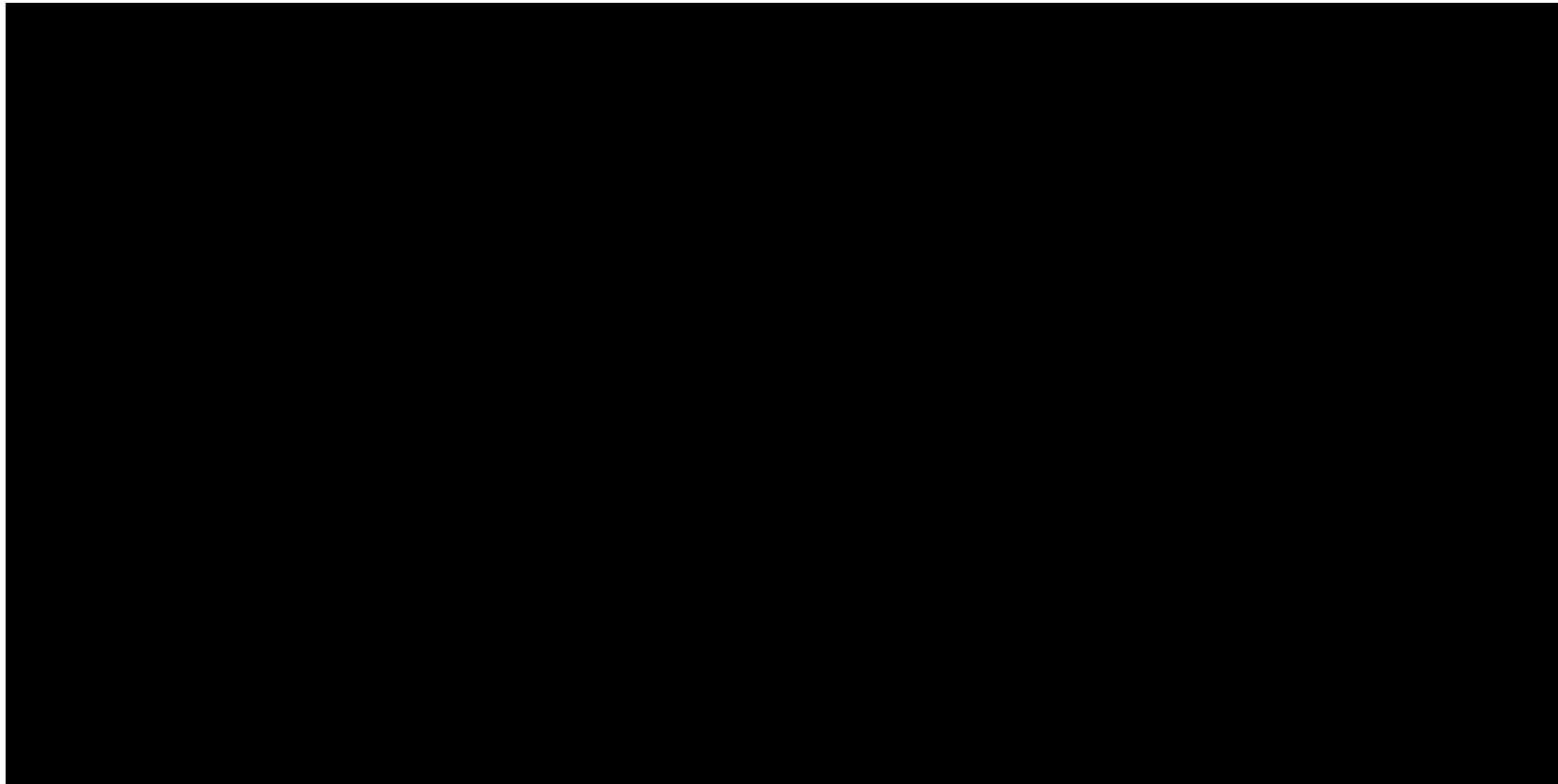
Notes

[Redacted text block]

Sources: TR-0908447 at tab "WL-Infra 2010-2021," row 81;
Black, Ryan C. and Spriggs James F. II. 2013. "The Citation and Depreciation of U.S. Supreme Court Precedent,"
Journal of Empirical Legal Studies 10: 325-358.

Notes: 1

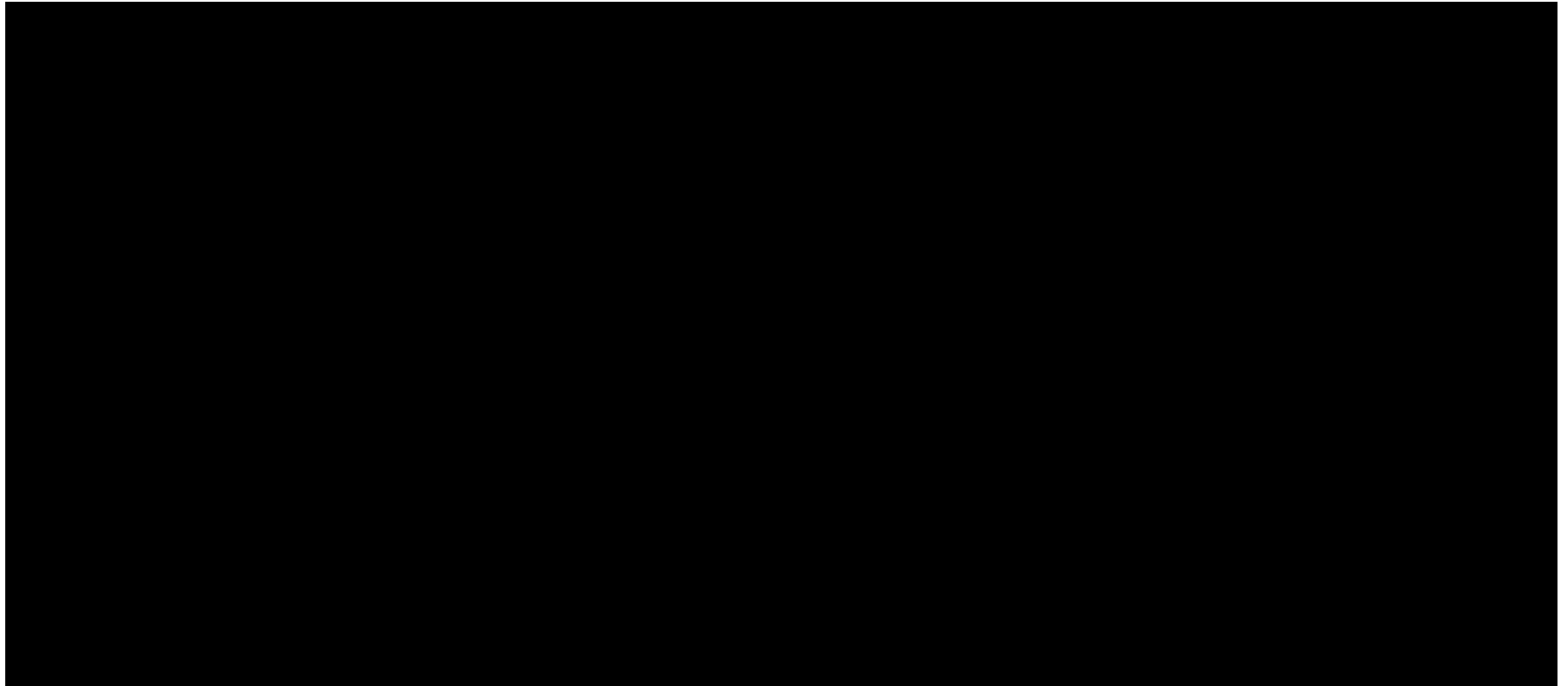
Sources: Black, Ryan C. and Spriggs James F. II. 2013."The Citation and Depreciation of U.S. Supreme Court Precedent,"
Journal of Empirical Legal Studies 10: 325-358.



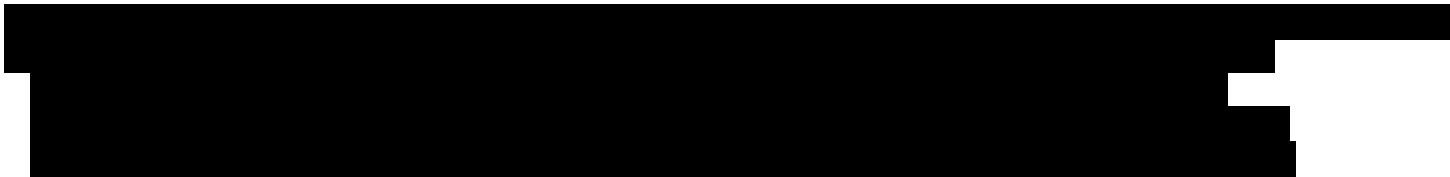
Notes:

[Redacted text block containing several lines of information, mostly obscured by black boxes.]

Sources: Black, Ryan C. and Spriggs James F. II. 2013. "The Citation and Depreciation of U.S. Supreme Court Precedent,"
Journal of Empirical Legal Studies 10: 325-358; Plaintiff and Counterdefendant's Second Supplemental Responses
and Objections to Interrogatory No. 21; TR-0908447.



Notes:



Sources: Expert Report of James E. Malackowski, p. 34; Expert Report of Jonathan L. Krein, ¶ 112-114.

Alan J. Cox
Independent Economic Consultant

Education

University of California, Berkeley

Ph.D., Business Administration, Economic Analysis and Policy Program, 1989
Major Fields: Industrial Organization, Finance, Econometrics

University of British Columbia

M.A., Economics, 1978

York University, Toronto

B.S., Environmental Science, 1976

Professional Experience

2020	Independent Economic Consultant Affiliated Consultant, NERA Economic Consulting
	NERA Economic Consulting
2020-	Outside Consultant
2016-2018	Chair of NERA's Global Intellectual Property Practice
2001-2019	Managing Director/Senior Vice President
1998-2001	Vice President
1994-1998	Senior Consultant
1988-1989	Senior Analyst
	Law & Economics Consulting Group, Inc.
1989-1994	Vice President and Senior Economist
	University of California, Berkeley
1983-1989	Research Assistant

1985-1987	Minimax Research Corporation Economist
1978-1981	Massachusetts Institute of Technology Visiting Economist
1978	University of British Columbia Research Associate

Teaching Experience

1994-1995	St. Mary's College of California Visiting Lecturer, Graduate School of Management Taught Industrial Structure and Competitive Strategy.
1989	Northeastern University Adjunct Lecturer, Graduate School of Management Taught Managerial Economics.
1984-1985	University of California, Berkeley Teaching Assistant Taught Intermediate Microeconomics.

Expert Testimony, Affidavits, and Reports

(Clients underlined)

Antitrust

Vicky Maldonado, et al. v. Apple Inc., et al., U.S.D.C. for the Northern District of California, San Francisco Division Case No. 3:16-cv-04067-WHO

Deposition on April 15, 2019, *Declaration and Expert Report in Support of Defendants' Opposition to Class Certification* dated April 8, 2019 on behalf of Apple Inc., AppleCare Service Company, Inc. and Apple CSC Inc. in rebuttal to Plaintiffs' Economic Expert report on class certification related to Apple service plans for iPhones and iPads in the U.S.

In Re Korean Ramen Antitrust Litigation, U.S. District Court for the Northern District of California, San Francisco Division, Case No. 3:13-cv-04115-WHO

Trial testimony on December 12-13, 2018, *Deposition* on September 27, 2017, *Reply Expert Report* dated August 18, 2017, *Supplemental Expert Report* dated July 21, 2017, *Reply Declaration* dated November 2, 2016, *Deposition testimony* on October 7, 2016 and *Declaration* of Alan J. Cox dated August 24, 2016 on behalf of Defendants Nongshim Co., Ltd., Nongshim America, Inc., Ottogi Co. Ltd and Ottogi America, Inc. responding in opposition to Motions by Direct Purchaser Plaintiffs and Indirect Purchaser Plaintiffs for Class Certification relating to the sales of Korean ramen products in the United States by Defendants.

Trendsettah USA, Inc. and Trend Settah, Inc. v. Swisher International, Inc., USDC Case No. 8:14-CV-01664-JDS

Trial Testimony March 24 and 29, 2016, *Supplemental Expert Report* dated December 18, 2015, *Deposition* on December 17, 2015 and *Expert Report* dated December 11, 2015 on behalf of defendant Swisher International, Inc. evaluating economic issues related to defendant's alleged anticompetitive conduct and alleged breach of contract.

Intellectual Property

SinCo Technologies Pte, Ltd. v. SinCo Electronics, (Dongguan) Co., Ltd.; XingKe Electronics (Dongguan) Co., Ltd; XingKe Electronics Technology Co., Ltd.; Sincoo Electronics Technology Co., Ltd.; Mui Lang Tjoa (An Individual); Ng Cher Yong Aka Cy Ng (An Individual); And Liew Yew Soon Aka Mark Liew (An Individual) U.S.D.C. for the Northern District of California, Case No. 3:17CV5517 EMC

Expert Report, January 9, 2020 on the economic consequences of defendants' trademark misuse and the appropriate methods for calculating the allowed remedies. *Supplemental Expert Report*, October 1, 2021 commenting late submitted data. *Trial testimony*, November 10 and 12, 2021.

FOX Factory, Inc., v. SRAM, LLC, and Sandleford Limited, U.S.D.C. for the District of Colorado Case Nos. 1:18-cv-00127-WJM-NYW and 1:18-cv-00130-WJM-NYW, Filed: October 11, 2017.

Rebuttal Report dated January 25, 2019 on behalf of defendants, SRAM, LLC and Sandleford Limited regarding purported reasonable royalty damages experienced by FOX, if any, from the alleged patent infringements by defendants.

TC Technology LLC v. Sprint Corporation and Sprint Spectrum, L.P., USDC for the District of Delaware Case No. 1:16-cv-00153-UNA, Filed: March 10, 2016.

Deposition November 20, 2018, *Expert Rebuttal Report* dated October 22, 2018 regarding economic issues regarding purported reasonable royalty damages.

ZF Micro Devices, Inc., et al. v. TAT Capital Partners, LTD., etc., et al, Santa Clara County Superior Court Case No. 1-09-CV 134970, Filed: February 17, 2009.

Deposition on September 14, 2018 on behalf of TAT Capital Partners, LTD regarding damages due to breach of fiduciary duty and conspiracy related to tortious activities.

Thomas Davidson, et al. v. Apple, Inc., U.S.D.C. for the Northern District of California Case No. 5:16-cv-4942-LHK, Filed: August 27, 2016.

Deposition on May 9, 2019, *Expert Rebuttal Report* dated February 15, 2019, *Declaration in Support of Defendant's Opposition to Amended Motion for Class Certification* dated December 6, 2018, *Declaration in Support of Defendant's Opposition to Motion for Class Certification* dated February 9, 2018, on behalf of defendant, Apple Inc. related to economic issues and sale of Apple smartphones in the U.S.

Amgen Inc. and Amgen Manufacturing Limited v. Sandoz Inc., Sandoz International GMBH, Sandoz GMBH, and LEK Pharmaceuticals D.D., USDC for the Northern District of California, San Francisco Division, Case 3:16-cv-02581, Filed: May 12, 2016.

Deposition on October 6, 2017, *Supplemental Expert Report* dated October 2, 2017 and *Expert Report* dated July 28, 2017 regarding lost profits and reasonable royalty damages for alleged patent infringements by Sandoz defendants.

C.R. Bard, Inc. and Bard Peripheral Vascular, Inc. v. AngioDynamics, Inc., U.S.D.C. for the District of Delaware, Case No. 1:15-cv-00218-SLR-SRF, Filed: March 10, 2015

Trial testimony March 6-7, 2019, *Deposition* dated December 13, 2017, *Reply to Supplemental Expert Report* dated December 6, 2017, *Reply Expert Report* dated December 1, 2017, *Expert Report* dated September 1, 2017 on behalf of C.R. Bard, Inc. and Bard Peripheral Vascular, Inc. ("Bard") regarding reasonable royalties and lost profits damages experienced by Bard as a result of alleged patent infringements by AngioDynamics, Inc.

The Regents of the University of California and Becton, Dickinson and Company v. Affymetrix, Inc. and Life Technologies Corp., U.S. District Court for the Southern District of California Case No. 3:17-cv-01394-H-NLS.

Deposition dated February 27, 2019, *Expert Report* dated December 7, 2018 regarding the need for a permanent injunction, lost profits damages, and reasonable royalty damages for the alleged patent infringement by Defendants, *Deposition* on September 22, 2017, *Declaration* in Support of Plaintiff, Becton, Dickinson and Company's Motion for Preliminary Injunction to enjoin sales of allegedly infringing brilliant polymers used in flow cytometry, dated July 12, 2017.

EON Corp. IP Holdings, LLC v. Apple Inc., USDC for the Northern District of California, San Francisco Division Case No. 3:14-CV-05511-WHO

Expert Report dated March 15, 2017 on behalf of Defendant, Apple Inc., regarding reasonable royalty damages experienced by EON Corp. as a result of an alleged patent infringement by Apple Inc.

In the Matter of: Certain Network Devices, Related Software and Components Thereof (I)

U.S. International Trade Commission Investigation No. 337-TA-944 Enforcement Proceedings

Testimony before the U.S. International Trade Commission on April 5, 2017, *Rebuttal Witness Statement* dated February 27, 2017, *Deposition* on February 6, 2017, *Supplemental Rebuttal Expert Report* on February 4, 2017 and *Rebuttal Report* on February 1, 2017 on behalf of respondent Arista Networks, Inc., regarding proposed penalty due to alleged non-compliance with a Cease and Desist Order issued in the underlying 944 investigation.

Telesocial Inc. v. Orange S.A., et al., USDC for the Northern District of California Case No. 3:14-cv-0398-JD

Deposition on December 22, 2016 and *Expert Report* dated December 12, 2016, on behalf of defendant Orange S.A., responding to plaintiff's expert's report with regard to alleged damages incurred by plaintiff due to defendant's alleged misappropriation of trade secrets.

AI-Daiwa, Ltd. v. Apparent, Inc., et al., US District Court for the Northern District of California Case No. CV13-04156(VC)

Deposition on August 14, 2015 and *Expert Rebuttal Report* dated July 29, 2015 on behalf of claimant AI-Daiwa, Ltd. regarding damages due to claimant's alleged breach of contract.

Alan J. Cox

Comcast Cable Communications, LLC, et al. v. Sprint Communications Company L.P., et al., US District Court for the Eastern District of Pennsylvania Case No. 2:12-cv-00859-JD

Deposition on April 1, 2016, *Expert Report* dated July 15, 2015 on behalf of defendants Sprint Communications Company L.P., Sprint Spectrum L.P., and Nextel Operations, Inc. (“Sprint”) regarding the purported reasonable royalty damages experienced by Comcast due to Sprint’s alleged infringement of Comcast’s patent.

Sprint Communications Company L.P., et al. v. Comcast Cable Communications LLC, et al., US District Court for the Eastern District of Pennsylvania Case No. 2:12-cv-00859-JD

Direct Trial Testimony and *Cross-Examination* in the Eastern District of Pennsylvania on February 9 and 10, 2017, *Deposition* on April 1, 2016, *Reply Expert Report* dated July 29, 2015 and *Expert Report* filed on June 17, 2015, on behalf of counterclaim-plaintiffs Sprint Communications Company L.P. and Sprint Spectrum L.P. (“Sprint”) regarding reasonable royalty damages experienced by Sprint due to Comcast’s alleged infringement of Sprint’s patents.

Class Certification

Ivan and Melanie Kail, Barry Garfinkel, Frederick Sharp v. Wolf Appliance, United States District Court for the Eastern District of New York.

Deposition on April 17, 2019, *Expert Rebuttal Report* dated March 7, 2019 on behalf of defendant, Wolf Appliance, Inc. Expert rebuttal of proposed damages methodology and class certification regarding Wolf ovens in the U.S.

Vicky Maldonado, et al. v. Apple Inc., et al., U.S.D.C. for the Northern District of California, San Francisco Division Case No. 3:16-cv-04067-WHO

Deposition on April 15, 2019, *Declaration and Expert Report in Support of Defendants’ Opposition to Class Certification* dated April 8, 2019 on behalf of Apple Inc., AppleCare Service Company, Inc. and Apple CSC Inc. in rebuttal to Plaintiffs’ Economic Expert report on class certification related to Apple service plans for iPhones and iPads in the U.S.

In Re Korean Ramen Antitrust Litigation, U.S. District Court for the Northern District of California, San Francisco Division, Case No. 3:13-cv-04115-WHO

Trial testimony on December 12-13, 2018, *Deposition* on September 27, 2017, *Reply Expert Report* dated August 18, 2017, *Supplemental Expert Report* dated July 21, 2017, *Reply Declaration* dated November 2, 2016, *Deposition testimony* on October 7, 2016 and *Declaration* of Alan J. Cox dated August 24, 2016 on behalf of Defendants Nongshim Co., Ltd., Nongshim America, Inc., Ottogi Co. Ltd and Ottogi America, Inc. responding in opposition to Motions by Direct Purchaser Plaintiffs and Indirect Purchaser Plaintiffs for Class Certification relating to the sales of Korean ramen products in the United States by Defendants.

Fabienne English, et al. v. Apple Inc., Applecare Service Company, Inc. and Apple CSC Inc., US District Court for the Northern District of California Case No. 3:14-cv-01619-WHO.

Deposition, September 25, 2015 and *Expert Report*, September 9, 2015 in rebuttal to Plaintiffs’ Economic Expert report on class certification related to Apple service plans for iPhones.

Contract Disputes

Major Brands, Inc. v. Mast-Jägermeister US, Inc., et al., U.S.D.C. for the Eastern District of Missouri Eastern Division, Case No. 4:18-cv-00423-HEA

Trial testimony, November 18, 2020. *Reply Report* dated December 4, 2020. *Deposition* dated September 2, 2020, *Initial Expert Report* dated November 1, 2019 on behalf of plaintiff Major Brands, Inc. regarding damages suffered by Major Brands as a result of the alleged wrongful termination of the Distribution Agreement and the alleged wrongful actions by the defendants.

Cypress Insurance Company, as subrogee of Microsoft Corporation, v. SK hynix America, Inc., USDC, for the Western District of Washington at Seattle Case No. 2:17-cv-00467-RAJ, Filed: March 23, 2017.

Trial testimony on March 19, 2019, *Deposition* dated October 10, 2018, *Rebuttal Expert Report* dated September 25, 2018, *Initial Expert Report* dated September 4, 2018 regarding economic issues related to an alleged breach of a supply agreement for DRAM chips between SK Hynix America and Microsoft Corporation.

PUBLICATIONS

“The Damages Testimony in VLSI Technologies v. Intel,” Guest Post on Patently-O, March 19, 2021. [Guest Post by Alan Cox: The Damages Testimony in VLSI Technologies v. Intel | Patently-O \(patentlyo.com\)](https://patentlyo.com/guest-post-by-alan-cox-the-damages-testimony-in-vlsi-technologies-v-intel/)

David S. Almeling, et al., *Disputed Issues in Awarding Unjust Enrichment Damages in Trade Secret Cases*, 19 Sedona Conf. J. 667 (2018).

“The Limitations of Analytical Approach to Reasonable Royalty,” published April 13, 2017 in *Law360*. Dr. Cox offers a rebuttal to a previously published *Law360* article, “Determining Reasonable Royalties with Analytical Approach.” He provides a detailed counterargument explaining that the analytical approach is inappropriate for the valuation of intellectual property and that it is especially ill-suited for complex products.

“Using Citation Analysis to Value Patents,” published in *Financier Worldwide* Magazine January 2016 Issue.

“Misuse of Patent Citation Analysis in *Finjan v. Blue Coat*,” published October 7, 2015 in *Law360*. Dr. Cox provides an overview of how to assess patent values using quantitative data on number of forward citations received by a patent.

Article, “Off the Wagon,” published February 6, 2015 in *Commercial Dispute Resolution* magazine. The article discusses the analysis used to calculate damages based on lost profits to Major Brands due to both the alleged breach of contract by Diageo and tortious interference by the competing distributor.

Alan J. Cox

“The Demise of Junk Science and the 25% Rule,” column published in *IPLaw360*, 29 July 2010, with Stephen Rusek. It discusses the use of the so-called 25 Percent Rule which the writers point out has no rational, scientific, or business basis. This lack of principal combined with the *ad hoc* manner in which the purported rule is implemented can also give wildly unpredictable results.

“Three Cases Reshaping Patent Licensing Practice,” article published in *Managing Intellectual Property*, 1 March 2010, with Dr. Elizabeth M. Bailey and Dr. Gregory K. Leonard.

“Compensatory Damages Issues in Patent Infringement Cases: A Handbook for Federal District Court Judges.” Participation, with committee members, which included legal practitioners, trial judges, damages experts, and academics, in the development of a handbook for trial courts to consult on procedural practices that may be helpful in the management and adjudication of damages issues in patent cases. 20 January 2010.

“2 Economists’ Take On *i4i V. Microsoft*,” column published in *Law360*, 23 November 2009, with Mario Lopez, reviewing the damages raised in the CAFC’s hearings in the I4I case and the appropriate standards for estimating damages in patent infringement cases.

PRESENTATIONS AND WORKING PAPERS

Panelist for Webinar *TCL v. Ericsson* FRAND Decision: Legal Implications LIVE Webcast, September 07, 2018, The Knowledge Group, LLC.

Panelist, “Settling Trade Secret Disputes,” webinar hosted by the Intellectual Property Owners Association IP Chat Channel on January 30, 2018. Joining Dr. Cox were Victoria Cundiff of Paul Hastings and Barbara Reeves, mediator and arbitrator at JAMS.

Dr. Cox led a panel discussion on “Reasonable Royalty in FRAND” at the 2017 National Technology Law Conference in Taipei, Taiwan. The conference, presented by the National Chiao Tung University School of Law, was held on 25-26 October 2017.

October 13, 2017, invited speaker at the 6th Annual US-China Intellectual Property Summit co-hosted by Loyola Law School, The Berkeley Center for Law and Technology, and China Renmin University IP Academy. Dr. Cox spoke on “New Trends in IP Litigation, Courts, and Enforcement.”

Dr. Cox addressed a conference on “Economics in IP and IP in Economics” held at Renmin University in Beijing on 14-15 July 2016. He discussed issues on the appropriate calculation of damages in IP matters and related issues in antitrust. Dr. Cox also appeared as an expert invited by the USPTO and met with the judges of the Jiangsu and Guangdong High Courts.

Panelist at a video webcast titled “Preparing for an Exit: Private Company Valuation,” hosted by Expert Webcast on April 28, 2016. Dr. Cox discussed techniques and considerations in the valuation of Intellectual Property.

Alan J. Cox

Invited speaker at the *Eighth Annual International Legal Alliance Summit & Awards*, organized by Leaders League, in New York City on June 24, 2015. Dr. Cox participated in an expert insights session entitled “International IP Trends: Litigation & Prosecution, IP Wars.”

July 22, 2015, Panelist on “Meeting the Challenge of Patent Valuation” at the CPIP’s Summer Institute in Patent Law, Beaver Creek CO, sponsored by Center for the Protection of Intellectual Property, George Mason University School of Law.

Keynote Speaker, at the *2014 International Symposium on Damages for Patent Infringement*, hosted by the Taiwan Intellectual Property Training Academy (TIPA): Taipei, Taiwan on October 24, 2014. Dr. Cox presented “Determining Patent Damages: Lessons and Challenges from the US” and served as a panelist in a session entitled “Damage Calculation of Patent Infringement in Taiwan: Observations on Development in Recent Years.”

Program Co-chair, “Litigating Patent Damages: Strategic Issues for Proving and Refuting Damages Claims,” hosted by Law Seminars International, San Francisco May 29-30, 2014. Dr. Cox also took part on a panel and discussed issues raised in *CMU v. Marvell*: Foreign Sales and the use of the Analytical Method as an alternative to the Hypothetical Negotiation, including products made and sold outside the U.S. in the royalty base.

“Intangibles: The Challenge of Understanding Value Creation within Multinational Enterprises.” In this NERA seminar, held in Paris on 12 December 2013, Dr. Cox and NERA colleagues, Dr. Emmanuel Llinares and Vice President Sébastien Gonnet discussed how to identify and map intangibles within multinational enterprises (MNEs), and presented the economic framework for intangibles valuation.

Presentation to Gibson Dunn & Crutcher, LLP titled “Determining Whether a Stock (or Stocks) Traded Efficiently and the Deutsche Bank Decision,” in San Francisco on December 4, 2013. Discussed issues involved in Securities 10b5 cases as they relate to efficient markets and explored the US District Court’s interesting decision in *Deutsch Bank*.

Presentation to Latham & Watkins, LLP titled “Determining Whether a Stock (or Stocks) Traded Efficiently,” in San Francisco on October 15, 2013.

Participation, in *Economics Analysis of Business Disputes*, seminar hosted by NERA in Tokyo on July 19, 2013. Dr. Cox and Economists from NERA’s Japan and US offices examined recent economic analyses in complex business disputes and litigation in Japan and the United States. Dr. Cox presented “Trends in Patent Litigation in the United States: Consequences for Global Companies.”

Presentation to Haynes and Boone, LLP titled “Patent Trolls or Patent Angels: Who are They and How Do They Affect Innovation?” in Dallas, Texas on June 12, 2013.

Alan J. Cox

Participation in the *IP Strategy Summit: Enforcement*, hosted by IGlobal Forum in Washington, DC on 29-30 May 2013. “Standard Essential Patents (SEPS) and Your Enforcement Strategy,” moderated by NERA colleague, Dr. David Blackburn, and panelists Dr. Alan Cox, Paul Michel, retired Chief Judge of the Federal Circuit and Laura Beth Miller of Brinks Hofer Gibson & Lion discussed the current SEPs landscape in light of recent disputes among smartphone technology owners, the recent RAND decision in the *Microsoft v. Motorola* case and trends in both federal courts and the US International Trade Commission. Dr. Cox also took part on a panel entitled “International Enforcement: Globalization and Your IP,” which covered intellectual property enforcement issues in China, India and Europe.

Dr. Cox was invited to be a panelist on the IPO IP Chat Channel webinar on “FRAND Determined: Judge Robart’s Decision in *Microsoft v. Motorola/Google*,” on May 9, 2013. Joining Dr. Cox were William Coats of Greenberg Traurig and Sandy Block of IBM.

“Effective Responses to Patent Trolls: We Can Cross That Bridge.” Alan Cox and Bob Skitol of Drinker Biddle were joined by Cynthia Bright, Esq. of Hewlett-Packard Company, Michelle Lee, Director, USPTO Silicon Valley; and Fiona Scott Morton, Professor, Yale School of Management at NERA/DrinkerBiddle hosted luncheon conference on May 8, 2013 in East Palo Alto. Dr. Cox discussed effective responses to patent infringement claims and threats of such claims from patent assertion entities.

Presentation to Winston & Strawn LLP titled “The Use of Comparable Licenses” with NERA colleague Anne Gron, Ph.D. in Chicago on May 1, 2013.

Presentation to Steptoe & Johnson LLP titled “Rigorous Economic Basis for Calculating and Proving IP Damages” in Washington, DC on April 12, 2013.

Dr. Cox was invited to address the course in “Intellectual Property Legal Practice” at Beijing University School of Law on 3 March 2013. The course, managed by the Beijing office of King & Wood Mallesons, is designed to enable students to master the basic theory and practices of intellectual property law. Dr. Cox discussed issues of intellectual property valuation, damages assessment, and possible anticompetitive uses of intellectual property incorporated into standards.

Participation, in the 2012 *Cross-Border IPR Dispute Resolution Conference*, hosted by ASCo: Seoul, Korea on October 17-18, 2012. NERA sponsored this conference, where Dr. Cox led a master class entitled “IPR Negotiation: Effective Calculation of Patent Damages and Negotiation Tactics.”

Presentation, a GIL 2012: The Global Community of Growth, Innovation and Leadership, hosted by the GIL Community: San Jose, California. Dr. Cox gave a presentation on “Developments in IP Protection in China” on September 12, 2012.

Presentation to Latham & Watkins, LLP titled “Current Use of Economic Analyses in Class Certification in Securities Fraud Matters” with NERA colleague Stefan Boettrich in New York City on January 17, 2012.

Alan J. Cox

Participation in “The Lifecycle of a US ‘Class Action’ Lawsuit: What Chinese Companies Need to Know,” hosted by Marsh: Beijing, China, November 1, 2011.

“Recent trends in US patent litigation and the impact on non-US companies” presentation at the 8th Annual Asia-Pacific IP Forum in, Kowloon, Hong Kong on September 29, 2011.

“International Trends in Securities Fraud Litigation and the Impact on Chinese Companies,” presentation with NERA colleague Mark Berenblut, hosted by the Hong Kong Society of Financial Analysts on September 27, 2011 in Hong Kong. Dr. Cox discussed the economics of damages claims in lawsuits alleging securities fraud by directors and officers of companies listed on the US and other stock exchanges.

“Comparables: the use and misuse of benchmark royalty rates for patent damages,” hosted by Dewey LeBeouf, San Francisco on July 12, 2011. Dr. Cox addressed the role of licenses and industry benchmarks in the determination of reasonable royalties.

Panelist at the “Stanford IP Seminar for Intellectual Property Judges from The People’s Republic of China,” hosted by Stanford Law School May 23-27, 2011. Dr. Cox and co-panelist, USDC for the Northern District of California, Elizabeth D. Laporte, Magistrate Judge, discussed current United States intellectual property law and patent damages.

“Licensing and Litigating Reasonable Royalties for the Patents in Technical Standards,” hosted by the Austin Chapter of Licensing Executives Society (LES) on May 31, 2011. Dr. Cox discussed the difficulties in defining a Fair, Reasonable, and Non-Discriminatory (FRAND) royalty, an issue that often results in litigation.

“Implications of Recent Legal Developments on the Handling of Patent Cases in the Trial Court.” Dr. Cox discussed the evolving standards in damages estimation at the patent litigation presentation to the District Judicial Council for the Southern District of California on April 25, 2011 in Dana Point, CA.

“Unlocking *Uniloc*: Meeting the Court’s New Evidentiary Standards for Reasonable Royalties,” one of a series of roundtable discussions hosted by NERA in San Francisco on March 3 and Palo Alto, California on March 4, 2011.

Moderator, “*Uniloc v. Microsoft*: A Key New Ruling for Patent Damages,” expert analysis telebriefing hosted by Law Seminars International on January 21, 2011.

Presentation to Allen and Overy LLP and to Ashurst LLP titled “The Simple Economics of Reasonable Royalties for Patents Incorporated into a Technical Standard,” in London on December 6, 2010.

“Trends in Intellectual Property Protection and Antitrust Enforcement in China,” seminar hosted by NERA in San Francisco on November 3, 2010.

Alan J. Cox

Presentation at Foley & Lardner LLP's "Eye on China Roundtable Series," by Dr. Cox with Victor Xue, Executive Vice-President, US-China Green Energy Council and Catherine Sun, Managing Partner, Foley & Lardner Shanghai Offices, titled "IP Enforcement in China 2010: Myth or Reality?" given in Palo Alto on November 1, 2010.

Silicon Valley Chapter of Licensing Executives Society, Panelist, "Licensing and Litigating Reasonable Royalties for the Patents in Technical Standards," September 22, 2010.

"Tips for Determining 'Reasonable' Royalties: The impact of recent case law on the economic analysis." Presentations at conference on "Legal Issues in Software Development," sponsored by Law Seminars International on June 16, 2010, in Seattle, WA.

Presentation to ZTE Corporation on June 4, 2010 in Shenzhen, China on patent infringement damage calculations in the United States.

Presentation to the Supreme People's Court of the People's Republic of China, including Chief Justice Kong Xiangjun, on May 26, 2010. Dr. Cox, together with NERA colleague, Dr. Fei Deng, discussed the methods used in the United States to calculate damages in patent, trade secret, and trademark infringement litigation. They also discussed antitrust issues related to intellectual property.

"Infringement Decisions and Judgments: Important Lessons from High Profile Cases," presented at the 2nd Annual Anti-Monopoly & Competition Law Summit held May 25-27 in Beijing. Dr. Cox discussed the differing treatment of *Intel* in jurisdictions around the world.

Panelist, "Trade Secret Remedies—Getting Creative," one-hour webinar hosted by the Intellectual Property Owners Association IP Chat Channel on April 1, 2010.

"Using Economics to Accurately Value IP," presentation with colleagues, Stephen Rusek and Dr. Mario Lopez, given at the Fenwick & West LLP Mountain View office on February 25, 2010.

"Damage Quantification in Patent Litigation: Putting the 'Reasonable' in Reasonable Royalty Rate Determinations," seminar hosted by NERA in Toronto, Canada on December 9, 2009. Dr. Cox and colleague, Mark Berenblut discussed patent valuation and reasonable royalties.

"Groundhog Day: Recurring Themes on Reasonable Royalties in Recent IP Damage Cases," NERA working paper, December 7, 2009, with colleagues Dr. Elizabeth M. Bailey and Dr. Gregory K. Leonard.

HIGHLY CONFIDENTIAL – ATTORNEY EYES ONLY

Appendix B

Documents Reviewed

In Connection with

Thomson Reuters Enterprise Centre GmbH and West Publishing Corporation, v. ROSS
Intelligence Inc.

Case No. 20-613-SB

Court Documents

- Plaintiffs and Counterdefendants Thomson Reuters Enterprise Centre GmbH and West Publishing Corporation's Complaint, dated May 6, 2020
- Plaintiffs and Counterdefendants Thomson Reuters Enterprise Centre GmbH and West Publishing Corporation's Third Supplemental Response and Objections to Defendant and Counterclaimant ROSS Intelligence Inc.'s Interrogatory No. 1, dated August 22, 2022
- Plaintiffs and Counterdefendants Thompson Reuters Enterprise Center GmbH and West Publishing Corporation's Second Supplemental Responses and Objections to Defendant and Counterclaimant ROSS Intelligence Inc.'s Interrogatory No. 21, dated June 9, 2022
- *Craig v. Oakwood Hosp.*, 684 N.W.2d 296, 312 (Mich. 2004)
- *Great Am. Opportunities, Inc. v. Cherrydale Fundraising, LLC*, 2010 WL 338219 (Del. Ch. Jan. 29, 2010)
- *Schafersman v. Agland Coop*, 631 N.W.2d 862, 871 (Neb. 2001)

Deposition Transcripts

- Deposition of Mark Hoffman, dated March 16, 2022
- Deposition of Erik Lindberg, dated March 22, 2022
- Deposition of Andrew Martins, dated March 25, 2022
- Deposition of Laurie Oliver, dated March 30, 2022
- Deposition of Sean Shafik, dated April 22, 2022
- Deposition of Edward Walters, dated March 1, 2022

Expert Reports

- Expert Report of Alan J. Cox, dated August 1, 2022
- Expert Rebuttal Report of Alan J. Cox, dated September 6, 2022

HIGHLY CONFIDENTIAL – ATTORNEY EYES ONLY

- Expert Rebuttal Report of Barbara Fredrickson-Cross, dated September 6, 2022
- Expert Report of Dr. Jonathan L. Krein, dated August 1, 2022
- Expert Report of James E. Malackowski, August 1, 2022

Academic Literature

- Allen, Mark A., Hall, Robert E., and Lazera, Victoria A. 2011. “Reference Guide on Estimation of Economic Damages,” in *Reference Manual on Scientific Evidence*, Committee on the Development of the Third Edition of the Reference Manual on Scientific Evidence; Federal Judicial Center; National Research Council, pp. 425-502
- American Law Institute. 1979. *Restatement of the Law, Second, Torts 2d*, American Law Institute Publishers
- Black, Ryan C. and Spriggs James F. II. 2013. “The Citation and Depreciation of U.S. Supreme Court Precedent,” *Journal of Empirical Legal Studies* 10: 325-358.
- Cotter, Thomas F. 2008. “Fair Use and Copyright Overenforcement,” *Iowa Law Review* 93: 1271-1318
- Evans, Elizabeth A., Phil J. Innes, and Daniel G. Lentz. 2017. “Damages Theories and Causation Issues,” in *Litigation Services Handbook: The Role of the Financial Expert*, pp. 1-53
- Glazer, Amihai, and Hassin, Refael. 1982. “On the Economics of Subscriptions,” *European Economic Review* 19: 343-356
- Hall, Robert E., and Dale W. Jorgenson. 1967. “Tax policy and investment behavior,” *American Economic Review* 57: 391-414
- Hook, Peter A., and Mattson, Kurt R. 2017. “Surprising Differences: An Empirical Analysis of LexisNexis and West Headnotes in the Written Opinions of the 2009 Supreme Court Term.” *Library Law Journal* 109: 557-629
- Jones, Charles I. 2009. “Investment,” available at <https://web.stanford.edu/~chadj/Investment2009-12-21.pdf> Jones, Charles I., and Tonetti, Christopher. 2020. “Nonrivalry and the Economics of Data,” *American Economic Review* 110: 2819-2858
- Lemley, Mark A., and Bryan Casey. 2020. “Fair Learning,” *Texas Law Review* 99: 743-785
- Nimmer, Melville B. 2022. *Nimmer on Copyright*, LexisNexis
- Pindyck, Robert S., and Rubinfeld, Daniel L. 2018. *Microeconomics*, 8th ed., Pearson

HIGHLY CONFIDENTIAL – ATTORNEY EYES ONLY

- Rudich, Eric A., Lewis M. Koppel, and Michael P. Padden. 2014. “Post-Uniloc Reasonable Royalty Damages: What to Do Now and How to Present It to the Jury?” *Landslide* 6: 42-47

Data Sources and Websites

- “Attorney Editor Salary in Minnesota,” salary.com, available at <https://www.salary.com/research/salary/recruiting/attorney-editor-salary/mn> (Accessed on September 14, 2022)
- “Attorney Editor Salary,” ZipRecruiter, available at <https://www.ziprecruiter.com/Salaries/Attorney-Editor-Salary> (Accessed September 14, 2022)
- "Black American English - Spontaneous Dialogue," Defined.ai, available at <https://getdata.defined.ai/default/49-hours-of-en-us-spontaneous-dialogue-data-in-afi-banking-b1> (Accessed September 9, 2022)
- "Black American English - Spontaneous Dialogue," Defined.ai, available at <https://getdata.defined.ai/default/56-hours-of-en-us-spontaneous-dialogue-data-in-afi-insurance-b1> (Accessed September 9, 2022)
- "Black American English - Spontaneous Dialogue," Defined.ai, available at <https://getdata.defined.ai/default/51-hours-of-en-us-spontaneous-dialogue-data-in-afi-retail-b1> (Accessed September 9, 2022)
- "Black American English - Spontaneous Dialogue," Defined.ai, available at <https://getdata.defined.ai/default/45-hours-of-en-us-spontaneous-dialogue-data-in-afi-telco-b1> (Accessed September 9, 2022)
- “Choosing the Right Speech Training Data: The Importance of Diverse Data,” Defined.ai, available at <https://www.defined.ai/blog/choosing-the-right-speech-training-data-the-importance-of-diverse-data/> (Accessed September 20, 2022)
- “Employer Costs for Employee Compensation – Private Industry Workers”, U.S. Bureau of Labor Statistics. Available at <https://www.bls.gov/web/ecec/ecec-private-dataset.xlsx> (Accessed September 7, 2022)
- “English Speech Data - Scripted Monologue,” Defined.ai, available at <https://getdata.defined.ai/default/342-hours-of-en-us-scripted-monologue-data-in-tof-generic-b1> (Accessed August 17, 2022)
- "English Speech Data - Scripted Monologue," Defined.ai, available at <https://getdata.defined.ai/default/99-hours-of-en-us-scripted-monologue-data-in-ddm-generic-b1> (Accessed September 9, 2022)
- "English Speech Data - Spontaneous Dialogue," Defined.ai, available at <https://getdata.defined.ai/default/271-hours-of-en-us-spontaneous-dialogue-data-in-jpt-banking-b1> (Accessed September 9, 2022)

HIGHLY CONFIDENTIAL – ATTORNEY EYES ONLY

- "English Speech Data - Spontaneous Dialogue," Defined.ai, available at <https://getdata.defined.ai/default/16-hours-of-en-us-spontaneous-dialogue-data-in-afi-healthcare-retail-b1> (Accessed September 9, 2022)
- "English Speech Data - Spontaneous Dialogue," Defined.ai, available at <https://getdata.defined.ai/default/135-hours-of-en-us-spontaneous-dialogue-data-in-jpt-insurance-b1> (Accessed September 9, 2022)
- "English Speech Data - Spontaneous IVR," Defined.ai, available at <https://getdata.defined.ai/default/173-hours-of-en-us-spontaneous-ivr-data-in-afi-banking-b1> (Accessed September 9, 2022)
- "English Speech Data - Spontaneous IVR," Defined.ai, available at <https://getdata.defined.ai/default/186-hours-of-en-us-spontaneous-ivr-data-in-afi-insurance-b1> (Accessed September 9, 2022)
- "English Speech Data - Spontaneous IVR," Defined.ai, available at <https://getdata.defined.ai/default/195-hours-of-en-us-spontaneous-ivr-data-in-afi-retail-b1> (Accessed September 9, 2022)
- "English Speech Data - Spontaneous IVR," Defined.ai, available at <https://getdata.defined.ai/default/209-hours-of-en-us-spontaneous-ivr-data-in-afi-telco-b1> (Accessed September 9, 2022)
- "Glossary of Statistical Terms," OECD. Available at <https://stats.oecd.org/glossary/detail.asp?ID=2826#:~:text=Definition%3A,the%20%E2%80%9Ccapital%20service%20price%22> (Accessed September 16, 2022)
- "Occupations Employment and Wage Statistics," U.S. Bureau of Labor Statistics, available at <https://www.bls.gov/oes/tables.htm> (Accessed September 15, 2022)
- Thomson Reuters Annual Report, (2017), available at <https://archive.annualreport.thomsonreuters.com/2017/downloads/annl-report-2017-thomson-reuters.pdf> (Accessed August 16, 2022)
- Thomson Reuters Annual Report, (2018), available at <https://ir.thomsonreuters.com/static-files/b32e0ad2-b992-46da-890d-2a28f21b6aec> (Accessed September 13, 2022)
- "Thomas Reuters Attorney Editor (Summary)," Glassdoor, available at https://www.glassdoor.com/job-listing/attorney-editor-summary-thomson-reuters-JV_IC1162274_KO0,23_KE24,39.htm?jl=1007725931064&pos=101&ao=1277887&s=21&guid=00000182ff28de4b888768ec5a157e13&src=GD_JOB_AD&t=ESR (Accessed on September 14, 2022)
- "Thomas Reuters Editor Jobs," Indeed, available at <https://www.indeed.com/cmp/Thomson-Reuters/jobs?jk=7d1f2f3a6f19e24a&q=Editor&l=&start=0> (Accessed September 14, 2022)

HIGHLY CONFIDENTIAL – ATTORNEY EYES ONLY

- “Thomas Reuters PTO,” Comparably, available at <https://www.comparably.com/companies/thomson-reuters/paid-time-off> (Accessed September 14, 2022)
- “Thomson Reuters Fact Book 2019”, Thomson Reuters, p. 7. Available at <https://ir.thomsonreuters.com/static-files/b2175d6d-7c92-4a62-9e7a-3cae2593933d> (Accessed September 6, 2022.)
- “Weighted Average Cost of Capital for Thomson Reuters Corp., 2018,” *Bloomberg* (Accessed Sept. 13, 2022)
- “Westcast - A day in the life of a case” YouTube, available at <https://www.youtube.com/watch?v=mX2WrYzigRc> (Accessed September 12, 2022)

Bates Stamped Documents

- FASTCASE_090487
- FASTCASE_090429
- FASTCASE_085445
- LEGALEASE-00018036
- LEGALEASE-00030617
- LEGALEASE-00043224
- LEGALEASE-00123981
- LEGALEASE-00132781
- LEGALEASE-00132970
- LEGALEASE-00139081
- LEGALEASE-00139169
- LEGALEASE-00166082
- R-LEGALEASE-00101636-642
- ROSS-0000000001
- ROSS-0000000003
- ROSS-0000000005
- ROSS-0000000007
- ROSS-0000000008

HIGHLY CONFIDENTIAL – ATTORNEY EYES ONLY

- ROSS-000000094
- ROSS-000000096
- ROSS-000000294
- ROSS-000000296
- ROSS-003293551
- ROSS-003294930
- ROSS-003296510
- ROSS-003297673
- ROSS-003298574
- ROSS-003300771
- ROSS-003316272
- ROSS-003316274
- ROSS-003316299
- ROSS-003317686
- ROSS-003317702
- ROSS-003320846
- ROSS-003320863
- ROSS-003382388
- ROSS-009659108
- ROSS-009664862
- ROSS-009690394
- ROSS-009721062
- ROSS-009722263-299
- TR-0002846
- TR-0035897-908
- TR-0044730

HIGHLY CONFIDENTIAL – ATTORNEY EYES ONLY

- TR-0044740
- TR-0179830-837
- TR-0179838-842
- TR-0179843
- TR-0179885
- TR-0359063
- TR-0359130
- TR-0359253
- TR-0359347
- TR-0359383
- TR-0359401
- TR-0359458
- TR-0526552
- TR-0836004
- TR-0894151
- TR-0908447

EXHIBIT AN

~~CONFIDENTIAL – ATTORNEYS’ EYES ONLY~~

**EXPERT REPLY REPORT
OF
ALAN J. COX, PH.D.**

In Connection with

*Thomson Reuters Enterprise Centre GmbH and West Publishing Corporation, v. Ross
Intelligence Inc.*

Case No. 20-613-LPS

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

October 10, 2022

CONFIDENTIAL—ATTORNEYS’ EYES ONLY

NATIONAL ECONOMIC RESEARCH ASSOCIATES

FOUR EMBARCADERO CENTER, SUITE 400
SAN FRANCISCO, CA 94111

TELEPHONE: 415.291.1000 FACSIMILE: 415.291.1020

PRIVILEGED

**Expert Report of
Alan J. Cox, Ph.D.**

TABLE OF CONTENTS

I. QUALIFICATIONS 1

II. CONFIDENTIALITY..... 2

III. BACKGROUND AND ASSIGNMENT 2

IV. SUMMARY OF OPINIONS 3

V. FACTS AND DATA CONSIDERED IN FORMING MY OPINIONS 4

VI. [REDACTED] 4

VII. [REDACTED] 7

VIII. [REDACTED] 10

- APPENDIX A. Resume of Alan J. Cox**
- APPENDIX B. Documents Reviewed**

I. QUALIFICATIONS

[illegible][illegible]

3. [REDACTED]

[REDACTED]

¹ Expert Report of Alan J. Cox, Ph.D., dated August 1, 2022 (herein, “Cox Opening Report”).

² Expert Rebuttal Report of Alan J. Cox, Ph.D., dated September 6, 2022 (herein, “Cox Rebuttal of Krein”).

³ Expert Report of Alan J. Cox, Ph.D., dated September 20, 2022 (herein, “Cox Rebuttal of Malackowski”).

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

[REDACTED]

II. CONFIDENTIALITY

4. [REDACTED]

III. BACKGROUND AND ASSIGNMENT

5. [REDACTED]

6. [REDACTED]

⁴ Plaintiffs and Counterdefendants Thomson Reuters Enterprise Centre GmbH and West Publishing Corporation’s Complaint (herein, “Complaint”), ¶ 1.

⁵ Complaint, ¶¶ 49–53.

⁶ Plaintiffs and Counterdefendants Thomson Reuters Enterprise Centre GmbH and West Publishing Corporation’s Third Supplemental Response and Objections to Defendant and Counterclaimant ROSS Intelligence Inc.’s Interrogatory No. 1, p. 30. See also *id.*, p. 68

[REDACTED]

(see TR-0179838-842 at -840; TR-0179885).

(see TR-0179830-837 at -830; TR-0179838-842; TR-0179843; TR-0044730).

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

7. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

IV. SUMMARY OF OPINIONS

8. [REDACTED]
[REDACTED]

- [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

- [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

⁷ Rebuttal Expert Report of James E. Malackowski, dated September 6, 2022 (herein, “Malackowski Rebuttal Report”).

⁸ [REDACTED]
[REDACTED]

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

•

[REDACTED]

V. FACTS AND DATA CONSIDERED IN FORMING MY OPINIONS

9. [REDACTED]

VI. [REDACTED]

10. [REDACTED]

⁹ 17 U.S.C. § 107.

¹⁰ Cox Opening Report, ¶ 83. [REDACTED]

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

11. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED] [REDACTED]
[REDACTED]
[REDACTED]

12. [REDACTED]
[REDACTED]
[REDACTED] [REDACTED]
[REDACTED]
[REDACTED] [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

13. [REDACTED]
[REDACTED]

¹¹ Malackowski Rebuttal Report, p. 23. The quote Mr. Malackowski cites in this sentence comes from *Am. Geophysical Union v. Texaco Inc.*, 60 F.3d 913, 930 (2d Cir. 1994). [REDACTED]

¹² Cox Rebuttal of Krein, ¶¶ 17-31. See also Opening Expert Report of Dr. Jonathan L. Krein, August 1, 2022 (herein, “Krein Report”), ¶ 8 [REDACTED], ¶ 154 [REDACTED]

¹³ Malackowski Rebuttal Report, pp. 23-24.

¹⁴ Cox Rebuttal of Krein, ¶ 32-35.

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

[REDACTED]

14. [REDACTED]

15. [REDACTED]

¹⁵ Malackowski Rebuttal Report, pp. 23-24.

¹⁶ Cox Rebuttal of Krein, ¶¶ 41-43.

¹⁷ Plaintiffs and Counterdefendants Thomson Reuters Enterprise Centre GmbH and West Publishing Corporation’s Second Supplemental Responses and Objections to Defendant and Counterclaimant ROSS Intelligence Inc.’s Interrogatory No. 21, p. 18. See also, Deposition of Andrew Martens, dated March 25, 2022 (herein, “Martens Deposition”), 102:3-7 (“[REDACTED]”); ROSS-003390563.

¹⁸ Complaint, ¶ 3.

¹⁹ See Cox Rebuttal of Krein, ¶¶ 36-40.

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

[REDACTED]

VII. [REDACTED]

16. [REDACTED]

²⁰ Malackowski Rebuttal Report, p. 26.

²¹ Mr. Malackowski states that [REDACTED]
[REDACTED] Malackowski Rebuttal Report, p. 15; see also p. 13 ([REDACTED])

[REDACTED] See Cox Opening Report, ¶¶ 27, 71 ([REDACTED])

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

[REDACTED]

17. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

18. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

²² Malackowski Rebuttal Report, pp. 13-14

²³ Malackowski Rebuttal Report, p. 14. [REDACTED]

²⁴ Krein Report, ¶ 79 [REDACTED]

²⁵ Krein Report, ¶ 66, [REDACTED]

²⁶ Report of Defendant’s Expert L. Karl Branting, J.D., Ph.D., dated August 1, 2022, ¶¶ 59-65.

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

[REDACTED]

19. [REDACTED]

20. [REDACTED]

21. [REDACTED]

²⁷ Malackowski Rebuttal Report, p. 15.

²⁸ Malackowski Rebuttal Report, fn. 78.

²⁹ Cox Opening Report, ¶ 66.

³⁰ Cox Opening Report, ¶ 59. See also, for example, TR-0000525-527 at 525 [REDACTED]; TR-0000531-532 at 531 [REDACTED]

0000538-540 at 540 [REDACTED] TR- [REDACTED]

VIII. [REDACTED]

TR-0000541-543 at 541

³⁶ Cox Opening Report, ¶ 58-60.

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

[REDACTED]

24. [REDACTED]

25. [REDACTED]

26. [REDACTED]

³⁷ Cox Opening Report, ¶¶ 90-92.

³⁸ Malackowski Rebuttal Report, p. 21.

³⁹ Cox Opening Report, fn. 153.

⁴⁰ Cox Opening Report, ¶ 92. Courts have long recognized the “Law of Demand” under which buyers will purchase more of a product the lower its price. See *Crystal Semiconductor Corp. v. TriTech Microelectronics Intern., Inc.*, 246 F.3d 1336, 1359 (Fed.Cir. 2001). The court in *Crystal Semiconductor* cites Paul A. Samuelson’s classic text, *Economics*, pp. 53-55 (11th ed.1980)).

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

27. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

28. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

⁴¹ Malackowski Rebuttal Report, p. 20.

⁴² Cox Opening Report, ¶ 88.

⁴³ Cox Rebuttal of Malackowski, ¶ 32.

⁴⁴ Malackowski Rebuttal Report, p. 21.

⁴⁵ Council of Economic Advisors. 2016. “Benefits of competition and indicators of market power,” *Council of Economic Advisors Issue Brief, Updated May 2016*, pp. 1-2 (“A long line of economic literature argues that competition among firms benefits consumers via lower prices. Competition can benefit consumers in other ways as well: competition may lead to greater product variety, higher product quality, and greater innovation, which drives productivity growth and helps lift living standards.” [internal citations omitted]). See also Kovacic, William E., and Shapiro, Carl. 2000. “Antitrust policy: A century of economic and legal thinking.” *Journal of Economic Perspectives* 14(1): 43-60.

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

[REDACTED]

29. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

30. [REDACTED]

[REDACTED]

⁴⁶ ROSS-009664862; ROSS-009690394; ROSS-009721062.

⁴⁷ See for example TR-0000512-514 at 512

[REDACTED]

[REDACTED] TR-0000519-521 at 519

[REDACTED] ; TR-0000522-524 at 522

[REDACTED]); TR-0000525-527 at 525

[REDACTED] TR-0000531-532 at 531

[REDACTED]); TR0000533-535 at 533

[REDACTED] ; TR0000536-537 at 536

[REDACTED] ; TR-0000538-540 at 540

[REDACTED] ; TR-0000541-543 at 541

[REDACTED] TR0000544-545 at 544 (

[REDACTED]

⁴⁸ Malackowski Rebuttal Report, p. 19.

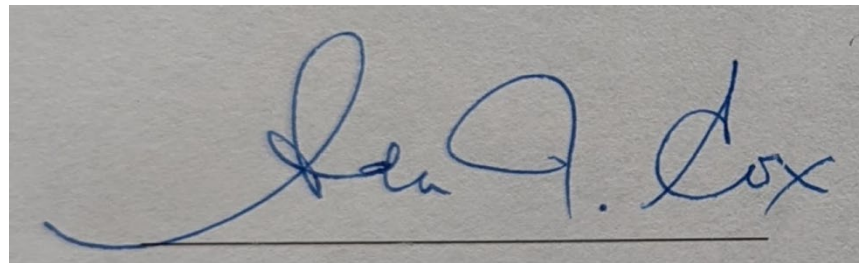
⁴⁹ Malackowski Rebuttal Report, p. 17.

⁵⁰ Cox Opening Report, ¶ 87.

⁵¹ Cox Opening Report, ¶ 92.

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

31. [REDACTED]



Alan J. Cox

⁵² Cox Opening Report, ¶¶ 85-95.

⁵³ See for example Barnett, Thomas O. 2017. “Maximizing Welfare Through Technological Innovation,” Presentation to the George Mason University Law Review 11th Annual Symposium on Antitrust, Washington, DC, p. 2 (“Consumer surplus will increase if the price declines, or if the quality or quantity at a given price increases, or if a new and better (more valuable) alternative to the good emerges.”). See also Council of Economic Advisors. 2016. “Benefits of competition and indicators of market power,” *Council of Economic Advisors Issue Brief, Updated May 2016*; Kovacic, William E., and Shapiro, Carl. 2000. “Antitrust policy: A century of economic and legal thinking.” *Journal of Economic Perspectives* 14(1): 43-60.

⁵⁴ Cox Opening Report, ¶ 96.

Alan J. Cox
Independent Economic Consultant

Education

University of California, Berkeley

Ph.D., Business Administration, Economic Analysis and Policy Program, 1989
Major Fields: Industrial Organization, Finance, Econometrics

University of British Columbia

M.A., Economics, 1978

York University, Toronto

B.S., Environmental Science, 1976

Professional Experience

2020	Independent Economic Consultant Affiliated Consultant, NERA Economic Consulting
	NERA Economic Consulting
2020-	Outside Consultant
2016-2018	Chair of NERA's Global Intellectual Property Practice
2001-2019	Managing Director/Senior Vice President
1998-2001	Vice President
1994-1998	Senior Consultant
1988-1989	Senior Analyst
	Law & Economics Consulting Group, Inc.
1989-1994	Vice President and Senior Economist
	University of California, Berkeley
1983-1989	Research Assistant

1985-1987	Minimax Research Corporation Economist
1978-1981	Massachusetts Institute of Technology Visiting Economist
1978	University of British Columbia Research Associate

Teaching Experience

1994-1995	St. Mary's College of California Visiting Lecturer, Graduate School of Management Taught Industrial Structure and Competitive Strategy.
1989	Northeastern University Adjunct Lecturer, Graduate School of Management Taught Managerial Economics.
1984-1985	University of California, Berkeley Teaching Assistant Taught Intermediate Microeconomics.

Expert Testimony, Affidavits, and Reports

(Clients underlined)

Antitrust

Vicky Maldonado, et al. v. Apple Inc., et al., U.S.D.C. for the Northern District of California, San Francisco Division Case No. 3:16-cv-04067-WHO

Deposition on April 15, 2019, *Declaration and Expert Report in Support of Defendants' Opposition to Class Certification* dated April 8, 2019 on behalf of Apple Inc., AppleCare Service Company, Inc. and Apple CSC Inc. in rebuttal to Plaintiffs' Economic Expert report on class certification related to Apple service plans for iPhones and iPads in the U.S.

In Re Korean Ramen Antitrust Litigation, U.S. District Court for the Northern District of California, San Francisco Division, Case No. 3:13-cv-04115-WHO

Trial testimony on December 12-13, 2018, *Deposition* on September 27, 2017, *Reply Expert Report* dated August 18, 2017, *Supplemental Expert Report* dated July 21, 2017, *Reply Declaration* dated November 2, 2016, *Deposition testimony* on October 7, 2016 and *Declaration* of Alan J. Cox dated August 24, 2016 on behalf of Defendants Nongshim Co., Ltd., Nongshim America, Inc., Ottogi Co. Ltd and Ottogi America, Inc. responding in opposition to Motions by Direct Purchaser Plaintiffs and Indirect Purchaser Plaintiffs for Class Certification relating to the sales of Korean ramen products in the United States by Defendants.

Trendsettah USA, Inc. and Trend Settah, Inc. v. Swisher International, Inc., USDC Case No. 8:14-CV-01664-JDS

Trial Testimony March 24 and 29, 2016, *Supplemental Expert Report* dated December 18, 2015, *Deposition* on December 17, 2015 and *Expert Report* dated December 11, 2015 on behalf of defendant Swisher International, Inc. evaluating economic issues related to defendant's alleged anticompetitive conduct and alleged breach of contract.

Intellectual Property

SinCo Technologies Pte, Ltd. v. SinCo Electronics, (Dongguan) Co., Ltd.; XingKe Electronics (Dongguan) Co., Ltd; XingKe Electronics Technology Co., Ltd.; Sincoo Electronics Technology Co., Ltd.; Mui Lang Tjoa (An Individual); Ng Cher Yong Aka Cy Ng (An Individual); And Liew Yew Soon Aka Mark Liew (An Individual) U.S.D.C. for the Northern District of California, Case No. 3:17CV5517 EMC

Expert Report, January 9, 2020 on the economic consequences of defendants' trademark misuse and the appropriate methods for calculating the allowed remedies. *Supplemental Expert Report*, October 1, 2021 commenting late submitted data. *Trial testimony*, November 10 and 12, 2021.

FOX Factory, Inc., v. SRAM, LLC, and Sandleford Limited, U.S.D.C. for the District of Colorado Case Nos. 1:18-cv-00127-WJM-NYW and 1:18-cv-00130-WJM-NYW, Filed: October 11, 2017.

Rebuttal Report dated January 25, 2019 on behalf of defendants, SRAM, LLC and Sandleford Limited regarding purported reasonable royalty damages experienced by FOX, if any, from the alleged patent infringements by defendants.

TC Technology LLC v. Sprint Corporation and Sprint Spectrum, L.P., USDC for the District of Delaware Case No. 1:16-cv-00153-UNA, Filed: March 10, 2016.

Deposition November 20, 2018, *Expert Rebuttal Report* dated October 22, 2018 regarding economic issues regarding purported reasonable royalty damages.

ZF Micro Devices, Inc., et al. v. TAT Capital Partners, LTD., etc., et al, Santa Clara County Superior Court Case No. 1-09-CV 134970, Filed: February 17, 2009.

Deposition on September 14, 2018 on behalf of TAT Capital Partners, LTD regarding damages due to breach of fiduciary duty and conspiracy related to tortious activities.

Thomas Davidson, et al. v. Apple, Inc., U.S.D.C. for the Northern District of California Case No. 5:16-cv-4942-LHK, Filed: August 27, 2016.

Deposition on May 9, 2019, *Expert Rebuttal Report* dated February 15, 2019, *Declaration in Support of Defendant's Opposition to Amended Motion for Class Certification* dated December 6, 2018, *Declaration in Support of Defendant's Opposition to Motion for Class Certification* dated February 9, 2018, on behalf of defendant, Apple Inc. related to economic issues and sale of Apple smartphones in the U.S.

Amgen Inc. and Amgen Manufacturing Limited v. Sandoz Inc., Sandoz International GMBH, Sandoz GMBH, and LEK Pharmaceuticals D.D., USDC for the Northern District of California, San Francisco Division, Case 3:16-cv-02581, Filed: May 12, 2016.

Deposition on October 6, 2017, *Supplemental Expert Report* dated October 2, 2017 and *Expert Report* dated July 28, 2017 regarding lost profits and reasonable royalty damages for alleged patent infringements by Sandoz defendants.

C.R. Bard, Inc. and Bard Peripheral Vascular, Inc. v. AngioDynamics, Inc., U.S.D.C. for the District of Delaware, Case No. 1:15-cv-00218-SLR-SRF, Filed: March 10, 2015

Trial testimony March 6-7, 2019, *Deposition* dated December 13, 2017, *Reply to Supplemental Expert Report* dated December 6, 2017, *Reply Expert Report* dated December 1, 2017, *Expert Report* dated September 1, 2017 on behalf of C.R. Bard, Inc. and Bard Peripheral Vascular, Inc. ("Bard") regarding reasonable royalties and lost profits damages experienced by Bard as a result of alleged patent infringements by AngioDynamics, Inc.

The Regents of the University of California and Becton, Dickinson and Company v. Affymetrix, Inc. and Life Technologies Corp., U.S. District Court for the Southern District of California Case No. 3:17-cv-01394-H-NLS.

Deposition dated February 27, 2019, *Expert Report* dated December 7, 2018 regarding the need for a permanent injunction, lost profits damages, and reasonable royalty damages for the alleged patent infringement by Defendants, *Deposition* on September 22, 2017, *Declaration* in Support of Plaintiff, Becton, Dickinson and Company's Motion for Preliminary Injunction to enjoin sales of allegedly infringing brilliant polymers used in flow cytometry, dated July 12, 2017.

EON Corp. IP Holdings, LLC v. Apple Inc., USDC for the Northern District of California, San Francisco Division Case No. 3:14-CV-05511-WHO

Expert Report dated March 15, 2017 on behalf of Defendant, Apple Inc., regarding reasonable royalty damages experienced by EON Corp. as a result of an alleged patent infringement by Apple Inc.

In the Matter of: Certain Network Devices, Related Software and Components Thereof (I)

U.S. International Trade Commission Investigation No. 337-TA-944 Enforcement Proceedings

Testimony before the U.S. International Trade Commission on April 5, 2017, *Rebuttal Witness Statement* dated February 27, 2017, *Deposition* on February 6, 2017, *Supplemental Rebuttal Expert Report* on February 4, 2017 and *Rebuttal Report* on February 1, 2017 on behalf of respondent Arista Networks, Inc., regarding proposed penalty due to alleged non-compliance with a Cease and Desist Order issued in the underlying 944 investigation.

Telesocial Inc. v. Orange S.A., et al., USDC for the Northern District of California Case No. 3:14-cv-0398-JD

Deposition on December 22, 2016 and *Expert Report* dated December 12, 2016, on behalf of defendant Orange S.A., responding to plaintiff's expert's report with regard to alleged damages incurred by plaintiff due to defendant's alleged misappropriation of trade secrets.

AI-Daiwa, Ltd. v. Apparent, Inc., et al., US District Court for the Northern District of California Case No. CV13-04156(VC)

Deposition on August 14, 2015 and *Expert Rebuttal Report* dated July 29, 2015 on behalf of claimant AI-Daiwa, Ltd. regarding damages due to claimant's alleged breach of contract.

Alan J. Cox

Comcast Cable Communications, LLC, et al. v. Sprint Communications Company L.P., et al., US District Court for the Eastern District of Pennsylvania Case No. 2:12-cv-00859-JD

Deposition on April 1, 2016, *Expert Report* dated July 15, 2015 on behalf of defendants Sprint Communications Company L.P., Sprint Spectrum L.P., and Nextel Operations, Inc. (“Sprint”) regarding the purported reasonable royalty damages experienced by Comcast due to Sprint’s alleged infringement of Comcast’s patent.

Sprint Communications Company L.P., et al. v. Comcast Cable Communications LLC, et al., US District Court for the Eastern District of Pennsylvania Case No. 2:12-cv-00859-JD

Direct Trial Testimony and *Cross-Examination* in the Eastern District of Pennsylvania on February 9 and 10, 2017, *Deposition* on April 1, 2016, *Reply Expert Report* dated July 29, 2015 and *Expert Report* filed on June 17, 2015, on behalf of counterclaim-plaintiffs Sprint Communications Company L.P. and Sprint Spectrum L.P. (“Sprint”) regarding reasonable royalty damages experienced by Sprint due to Comcast’s alleged infringement of Sprint’s patents.

Class Certification

Ivan and Melanie Kail, Barry Garfinkel, Frederick Sharp v. Wolf Appliance, United States District Court for the Eastern District of New York.

Deposition on April 17, 2019, *Expert Rebuttal Report* dated March 7, 2019 on behalf of defendant, Wolf Appliance, Inc. Expert rebuttal of proposed damages methodology and class certification regarding Wolf ovens in the U.S.

Vicky Maldonado, et al. v. Apple Inc., et al., U.S.D.C. for the Northern District of California, San Francisco Division Case No. 3:16-cv-04067-WHO

Deposition on April 15, 2019, *Declaration and Expert Report in Support of Defendants’ Opposition to Class Certification* dated April 8, 2019 on behalf of Apple Inc., AppleCare Service Company, Inc. and Apple CSC Inc. in rebuttal to Plaintiffs’ Economic Expert report on class certification related to Apple service plans for iPhones and iPads in the U.S.

In Re Korean Ramen Antitrust Litigation, U.S. District Court for the Northern District of California, San Francisco Division, Case No. 3:13-cv-04115-WHO

Trial testimony on December 12-13, 2018, *Deposition* on September 27, 2017, *Reply Expert Report* dated August 18, 2017, *Supplemental Expert Report* dated July 21, 2017, *Reply Declaration* dated November 2, 2016, *Deposition testimony* on October 7, 2016 and *Declaration* of Alan J. Cox dated August 24, 2016 on behalf of Defendants Nongshim Co., Ltd., Nongshim America, Inc., Ottogi Co. Ltd and Ottogi America, Inc. responding in opposition to Motions by Direct Purchaser Plaintiffs and Indirect Purchaser Plaintiffs for Class Certification relating to the sales of Korean ramen products in the United States by Defendants.

Fabienne English, et al. v. Apple Inc., Applecare Service Company, Inc. and Apple CSC Inc., US District Court for the Northern District of California Case No. 3:14-cv-01619-WHO.

Deposition, September 25, 2015 and *Expert Report*, September 9, 2015 in rebuttal to Plaintiffs’ Economic Expert report on class certification related to Apple service plans for iPhones.

Contract Disputes

Major Brands, Inc. v. Mast-Jägermeister US, Inc., et al., U.S.D.C. for the Eastern District of Missouri Eastern Division, Case No. 4:18-cv-00423-HEA

Trial testimony, November 18, 2020. *Reply Report* dated December 4, 2020. *Deposition* dated September 2, 2020, *Initial Expert Report* dated November 1, 2019 on behalf of plaintiff Major Brands, Inc. regarding damages suffered by Major Brands as a result of the alleged wrongful termination of the Distribution Agreement and the alleged wrongful actions by the defendants.

Cypress Insurance Company, as subrogee of Microsoft Corporation, v. SK hynix America, Inc., USDC, for the Western District of Washington at Seattle Case No. 2:17-cv-00467-RAJ, Filed: March 23, 2017.

Trial testimony on March 19, 2019, *Deposition* dated October 10, 2018, *Rebuttal Expert Report* dated September 25, 2018, *Initial Expert Report* dated September 4, 2018 regarding economic issues related to an alleged breach of a supply agreement for DRAM chips between SK Hynix America and Microsoft Corporation.

PUBLICATIONS

“The Damages Testimony in VLSI Technologies v. Intel,” Guest Post on Patently-O, March 19, 2021. [Guest Post by Alan Cox: The Damages Testimony in VLSI Technologies v. Intel | Patently-O \(patentlyo.com\)](https://patentlyo.com/guest-post-by-alan-cox-the-damages-testimony-in-vlsi-technologies-v-intel/)

David S. Almeling, et al., *Disputed Issues in Awarding Unjust Enrichment Damages in Trade Secret Cases*, 19 Sedona Conf. J. 667 (2018).

“The Limitations of Analytical Approach to Reasonable Royalty,” published April 13, 2017 in *Law360*. Dr. Cox offers a rebuttal to a previously published *Law360* article, “Determining Reasonable Royalties with Analytical Approach.” He provides a detailed counterargument explaining that the analytical approach is inappropriate for the valuation of intellectual property and that it is especially ill-suited for complex products.

“Using Citation Analysis to Value Patents,” published in *Financier Worldwide* Magazine January 2016 Issue.

“Misuse of Patent Citation Analysis in *Finjan v. Blue Coat*,” published October 7, 2015 in *Law360*. Dr. Cox provides an overview of how to assess patent values using quantitative data on number of forward citations received by a patent.

Article, “Off the Wagon,” published February 6, 2015 in *Commercial Dispute Resolution* magazine. The article discusses the analysis used to calculate damages based on lost profits to Major Brands due to both the alleged breach of contract by Diageo and tortious interference by the competing distributor.

Alan J. Cox

“The Demise of Junk Science and the 25% Rule,” column published in *IPLaw360*, 29 July 2010, with Stephen Rusek. It discusses the use of the so-called 25 Percent Rule which the writers point out has no rational, scientific, or business basis. This lack of principal combined with the *ad hoc* manner in which the purported rule is implemented can also give wildly unpredictable results.

“Three Cases Reshaping Patent Licensing Practice,” article published in *Managing Intellectual Property*, 1 March 2010, with Dr. Elizabeth M. Bailey and Dr. Gregory K. Leonard.

“Compensatory Damages Issues in Patent Infringement Cases: A Handbook for Federal District Court Judges.” Participation, with committee members, which included legal practitioners, trial judges, damages experts, and academics, in the development of a handbook for trial courts to consult on procedural practices that may be helpful in the management and adjudication of damages issues in patent cases. 20 January 2010.

“2 Economists’ Take On *i4i V. Microsoft*,” column published in *Law360*, 23 November 2009, with Mario Lopez, reviewing the damages raised in the CAFC’s hearings in the I4I case and the appropriate standards for estimating damages in patent infringement cases.

PRESENTATIONS AND WORKING PAPERS

Panelist for Webinar *TCL v. Ericsson* FRAND Decision: Legal Implications LIVE Webcast, September 07, 2018, The Knowledge Group, LLC.

Panelist, “Settling Trade Secret Disputes,” webinar hosted by the Intellectual Property Owners Association IP Chat Channel on January 30, 2018. Joining Dr. Cox were Victoria Cundiff of Paul Hastings and Barbara Reeves, mediator and arbitrator at JAMS.

Dr. Cox led a panel discussion on “Reasonable Royalty in FRAND” at the 2017 National Technology Law Conference in Taipei, Taiwan. The conference, presented by the National Chiao Tung University School of Law, was held on 25-26 October 2017.

October 13, 2017, invited speaker at the 6th Annual US-China Intellectual Property Summit co-hosted by Loyola Law School, The Berkeley Center for Law and Technology, and China Renmin University IP Academy. Dr. Cox spoke on “New Trends in IP Litigation, Courts, and Enforcement.”

Dr. Cox addressed a conference on “Economics in IP and IP in Economics” held at Renmin University in Beijing on 14-15 July 2016. He discussed issues on the appropriate calculation of damages in IP matters and related issues in antitrust. Dr. Cox also appeared as an expert invited by the USPTO and met with the judges of the Jiangsu and Guangdong High Courts.

Panelist at a video webcast titled “Preparing for an Exit: Private Company Valuation,” hosted by Expert Webcast on April 28, 2016. Dr. Cox discussed techniques and considerations in the valuation of Intellectual Property.

Alan J. Cox

Invited speaker at the *Eighth Annual International Legal Alliance Summit & Awards*, organized by Leaders League, in New York City on June 24, 2015. Dr. Cox participated in an expert insights session entitled “International IP Trends: Litigation & Prosecution, IP Wars.”

July 22, 2015, Panelist on “Meeting the Challenge of Patent Valuation” at the CPIP’s Summer Institute in Patent Law, Beaver Creek CO, sponsored by Center for the Protection of Intellectual Property, George Mason University School of Law.

Keynote Speaker, at the *2014 International Symposium on Damages for Patent Infringement*, hosted by the Taiwan Intellectual Property Training Academy (TIPA): Taipei, Taiwan on October 24, 2014. Dr. Cox presented “Determining Patent Damages: Lessons and Challenges from the US” and served as a panelist in a session entitled “Damage Calculation of Patent Infringement in Taiwan: Observations on Development in Recent Years.”

Program Co-chair, “Litigating Patent Damages: Strategic Issues for Proving and Refuting Damages Claims,” hosted by Law Seminars International, San Francisco May 29-30, 2014. Dr. Cox also took part on a panel and discussed issues raised in *CMU v. Marvell*: Foreign Sales and the use of the Analytical Method as an alternative to the Hypothetical Negotiation, including products made and sold outside the U.S. in the royalty base.

“Intangibles: The Challenge of Understanding Value Creation within Multinational Enterprises.” In this NERA seminar, held in Paris on 12 December 2013, Dr. Cox and NERA colleagues, Dr. Emmanuel Llinares and Vice President Sébastien Gonnet discussed how to identify and map intangibles within multinational enterprises (MNEs), and presented the economic framework for intangibles valuation.

Presentation to Gibson Dunn & Crutcher, LLP titled “Determining Whether a Stock (or Stocks) Traded Efficiently and the Deutsche Bank Decision,” in San Francisco on December 4, 2013. Discussed issues involved in Securities 10b5 cases as they relate to efficient markets and explored the US District Court’s interesting decision in *Deutsch Bank*.

Presentation to Latham & Watkins, LLP titled “Determining Whether a Stock (or Stocks) Traded Efficiently,” in San Francisco on October 15, 2013.

Participation, in *Economics Analysis of Business Disputes*, seminar hosted by NERA in Tokyo on July 19, 2013. Dr. Cox and Economists from NERA’s Japan and US offices examined recent economic analyses in complex business disputes and litigation in Japan and the United States. Dr. Cox presented “Trends in Patent Litigation in the United States: Consequences for Global Companies.”

Presentation to Haynes and Boone, LLP titled “Patent Trolls or Patent Angels: Who are They and How Do They Affect Innovation?” in Dallas, Texas on June 12, 2013.

Alan J. Cox

Participation in the *IP Strategy Summit: Enforcement*, hosted by IGlobal Forum in Washington, DC on 29-30 May 2013. “Standard Essential Patents (SEPS) and Your Enforcement Strategy,” moderated by NERA colleague, Dr. David Blackburn, and panelists Dr. Alan Cox, Paul Michel, retired Chief Judge of the Federal Circuit and Laura Beth Miller of Brinks Hofer Gibson & Lion discussed the current SEPs landscape in light of recent disputes among smartphone technology owners, the recent RAND decision in the *Microsoft v. Motorola* case and trends in both federal courts and the US International Trade Commission. Dr. Cox also took part on a panel entitled “International Enforcement: Globalization and Your IP,” which covered intellectual property enforcement issues in China, India and Europe.

Dr. Cox was invited to be a panelist on the IPO IP Chat Channel webinar on “FRAND Determined: Judge Robart’s Decision in *Microsoft v. Motorola/Google*,” on May 9, 2013. Joining Dr. Cox were William Coats of Greenberg Traurig and Sandy Block of IBM.

“Effective Responses to Patent Trolls: We Can Cross That Bridge.” Alan Cox and Bob Skitol of Drinker Biddle were joined by Cynthia Bright, Esq. of Hewlett-Packard Company, Michelle Lee, Director, USPTO Silicon Valley; and Fiona Scott Morton, Professor, Yale School of Management at NERA/DrinkerBiddle hosted luncheon conference on May 8, 2013 in East Palo Alto. Dr. Cox discussed effective responses to patent infringement claims and threats of such claims from patent assertion entities.

Presentation to Winston & Strawn LLP titled “The Use of Comparable Licenses” with NERA colleague Anne Gron, Ph.D. in Chicago on May 1, 2013.

Presentation to Steptoe & Johnson LLP titled “Rigorous Economic Basis for Calculating and Proving IP Damages” in Washington, DC on April 12, 2013.

Dr. Cox was invited to address the course in “Intellectual Property Legal Practice” at Beijing University School of Law on 3 March 2013. The course, managed by the Beijing office of King & Wood Mallesons, is designed to enable students to master the basic theory and practices of intellectual property law. Dr. Cox discussed issues of intellectual property valuation, damages assessment, and possible anticompetitive uses of intellectual property incorporated into standards.

Participation, in the 2012 *Cross-Border IPR Dispute Resolution Conference*, hosted by ASCo: Seoul, Korea on October 17-18, 2012. NERA sponsored this conference, where Dr. Cox led a master class entitled “IPR Negotiation: Effective Calculation of Patent Damages and Negotiation Tactics.”

Presentation, a GIL 2012: The Global Community of Growth, Innovation and Leadership, hosted by the GIL Community: San Jose, California. Dr. Cox gave a presentation on “Developments in IP Protection in China” on September 12, 2012.

Presentation to Latham & Watkins, LLP titled “Current Use of Economic Analyses in Class Certification in Securities Fraud Matters” with NERA colleague Stefan Boettrich in New York City on January 17, 2012.

Alan J. Cox

Participation in “The Lifecycle of a US ‘Class Action’ Lawsuit: What Chinese Companies Need to Know,” hosted by Marsh: Beijing, China, November 1, 2011.

“Recent trends in US patent litigation and the impact on non-US companies” presentation at the 8th Annual Asia-Pacific IP Forum in, Kowloon, Hong Kong on September 29, 2011.

“International Trends in Securities Fraud Litigation and the Impact on Chinese Companies,” presentation with NERA colleague Mark Berenblut, hosted by the Hong Kong Society of Financial Analysts on September 27, 2011 in Hong Kong. Dr. Cox discussed the economics of damages claims in lawsuits alleging securities fraud by directors and officers of companies listed on the US and other stock exchanges.

“Comparables: the use and misuse of benchmark royalty rates for patent damages,” hosted by Dewey LeBeouf, San Francisco on July 12, 2011. Dr. Cox addressed the role of licenses and industry benchmarks in the determination of reasonable royalties.

Panelist at the “Stanford IP Seminar for Intellectual Property Judges from The People’s Republic of China,” hosted by Stanford Law School May 23-27, 2011. Dr. Cox and co-panelist, USDC for the Northern District of California, Elizabeth D. Laporte, Magistrate Judge, discussed current United States intellectual property law and patent damages.

“Licensing and Litigating Reasonable Royalties for the Patents in Technical Standards,” hosted by the Austin Chapter of Licensing Executives Society (LES) on May 31, 2011. Dr. Cox discussed the difficulties in defining a Fair, Reasonable, and Non-Discriminatory (FRAND) royalty, an issue that often results in litigation.

“Implications of Recent Legal Developments on the Handling of Patent Cases in the Trial Court.” Dr. Cox discussed the evolving standards in damages estimation at the patent litigation presentation to the District Judicial Council for the Southern District of California on April 25, 2011 in Dana Point, CA.

“Unlocking *Uniloc*: Meeting the Court’s New Evidentiary Standards for Reasonable Royalties,” one of a series of roundtable discussions hosted by NERA in San Francisco on March 3 and Palo Alto, California on March 4, 2011.

Moderator, “*Uniloc v. Microsoft*: A Key New Ruling for Patent Damages,” expert analysis telebriefing hosted by Law Seminars International on January 21, 2011.

Presentation to Allen and Overy LLP and to Ashurst LLP titled “The Simple Economics of Reasonable Royalties for Patents Incorporated into a Technical Standard,” in London on December 6, 2010.

“Trends in Intellectual Property Protection and Antitrust Enforcement in China,” seminar hosted by NERA in San Francisco on November 3, 2010.

Alan J. Cox

Presentation at Foley & Lardner LLP's "Eye on China Roundtable Series," by Dr. Cox with Victor Xue, Executive Vice-President, US-China Green Energy Council and Catherine Sun, Managing Partner, Foley & Lardner Shanghai Offices, titled "IP Enforcement in China 2010: Myth or Reality?" given in Palo Alto on November 1, 2010.

Silicon Valley Chapter of Licensing Executives Society, Panelist, "Licensing and Litigating Reasonable Royalties for the Patents in Technical Standards," September 22, 2010.

"Tips for Determining 'Reasonable' Royalties: The impact of recent case law on the economic analysis." Presentations at conference on "Legal Issues in Software Development," sponsored by Law Seminars International on June 16, 2010, in Seattle, WA.

Presentation to ZTE Corporation on June 4, 2010 in Shenzhen, China on patent infringement damage calculations in the United States.

Presentation to the Supreme People's Court of the People's Republic of China, including Chief Justice Kong Xiangjun, on May 26, 2010. Dr. Cox, together with NERA colleague, Dr. Fei Deng, discussed the methods used in the United States to calculate damages in patent, trade secret, and trademark infringement litigation. They also discussed antitrust issues related to intellectual property.

"Infringement Decisions and Judgments: Important Lessons from High Profile Cases," presented at the 2nd Annual Anti-Monopoly & Competition Law Summit held May 25-27 in Beijing. Dr. Cox discussed the differing treatment of *Intel* in jurisdictions around the world.

Panelist, "Trade Secret Remedies—Getting Creative," one-hour webinar hosted by the Intellectual Property Owners Association IP Chat Channel on April 1, 2010.

"Using Economics to Accurately Value IP," presentation with colleagues, Stephen Rusek and Dr. Mario Lopez, given at the Fenwick & West LLP Mountain View office on February 25, 2010.

"Damage Quantification in Patent Litigation: Putting the 'Reasonable' in Reasonable Royalty Rate Determinations," seminar hosted by NERA in Toronto, Canada on December 9, 2009. Dr. Cox and colleague, Mark Berenblut discussed patent valuation and reasonable royalties.

"Groundhog Day: Recurring Themes on Reasonable Royalties in Recent IP Damage Cases," NERA working paper, December 7, 2009, with colleagues Dr. Elizabeth M. Bailey and Dr. Gregory K. Leonard.

CONFIDENTIAL – ATTORNEY EYES ONLY

Appendix B

Documents Reviewed

In Connection with

Thomson Reuters Enterprise Centre GmbH and West Publishing Corporation, v. ROSS
Intelligence Inc.

Case No. 20-613-SB

Court and Legal Documents

- Court's Order, dated July 25, 2022
- Plaintiffs and Counterdefendants Thomson Reuters Enterprise Centre GmbH and West Publishing Corporation's Complaint
- Plaintiffs and Counterdefendants Thomson Reuters Enterprise Centre GmbH and West Publishing Corporation's Third Supplemental Response and Objections to Defendant and Counterclaimant ROSS Intelligence Inc.'s Interrogatory No. 1
- Plaintiffs and Counterdefendants Thompson Reuters Enterprise Center GmbH and West Publishing Corporation's Second Supplemental Responses and Objections to Defendant and Counterclaimant ROSS Intelligence Inc.'s Interrogatory No. 21
- Letter from Miranda Means to Joachim Steinberg, dated May 11, 2022
- *Am. Geophysical Union v. Texaco Inc.*, 60 F.3d 913, 930 (2d Cir. 1994)
- *Crystal Semiconductor Corp. v. TriTech Microelectronics Intern., Inc.*, 246 F.3d 1336, 1359 (Fed.Cir. 2001)
- 17 U.S.C. § 107

Deposition Transcripts

- Deposition of Andrew Martins, dated March 25, 2022
- Deposition of Jimoh Obviagele, dated April 12, 2022

Expert Reports

- Report of Defendant's Expert L. Karl Branting, J.D., Ph.D., dated August 1, 2022
- Expert Report of Alan J. Cox, Ph.D., dated August 1, 2022
- Expert Rebuttal Report of Alan J. Cox, Ph.D., dated September 6, 2022
- Expert Report of Alan J. Cox, Ph.D., dated September 20, 2022
- Expert Report of Dr. Jonathan L. Krein, dated August 1, 2022

CONFIDENTIAL – ATTORNEY EYES ONLY

- Expert Rebuttal Report of James E. Malackowski, dated September 6, 2022

Academic Literature and Presentations

- Barnett, Thomas O. 2017. “Maximizing Welfare Through Technological Innovation,” Presentation to the George Mason University Law Review 11th Annual Symposium on Antitrust, Washington, DC
- Berring, Robert C. 1994. "Collapse of the structure of the legal research universe: The imperative of digital information." *Washington Law Review* 69(9): 9-34
- Council of Economic Advisors. 2016. “Benefits of competition and indicators of market power,” *Council of Economic Advisors Issue Brief, Updated May 2016*
- Grossman, George S. 1994. “Legal Research: Historical Foundations of the Electronic Age.” *Oxford University Press*
- Hanson, F. Allan. 2002. "From key numbers to keywords: How automation has transformed the law." *Law Library Journal* 94(4): 563-600
- Kovacic, William E., and Shapiro, Carl. 2000. “Antitrust policy: A century of economic and legal thinking.” *Journal of Economic Perspectives* 14(1): 43-60
- Mart, Susan Nevelow. 2017. "The algorithm as a human artifact: Implications for legal [re] search." *Law Library Journal* 109(3): 387-422

Bates Stamped Documents

- ROSS-003390563
- ROSS-009664862
- ROSS-009690394
- ROSS-009721062
- TR-0000512-514
- TR-0000519-521
- TR-0000522-524
- TR-0000525-527
- TR-0000531-532
- TR-0000533-535
- TR-0000536-537

CONFIDENTIAL – ATTORNEY EYES ONLY

- TR-0000538-540
- TR-0000541-543
- TR-0000544-545
- TR-0044730
- TR-0179830-837
- TR-0179838-842
- TR-0179843
- TR-0179885

EXHIBIT AO

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

THOMSON REUTERS ENTERPRISE)	
CENTRE GMBH and WEST PUBLISHING)	
CORPORATION,)	
	)	C.A. No. 20-613-SB
Plaintiffs/ Counterdefendants)	
	)	CONFIDENTIAL, HIGHLY
v.	)	CONFIDENTIAL – ATTORNEYS’
	)	EYES ONLY
ROSS INTELLIGENCE INC.,)	
)	
Defendant/ Counterclaimant.)	

EXPERT REPORT OF BARBARA FREDERIKSEN-CROSS

Table of Contents

INTRODUCTION	3
EXPERIENCE AND QUALIFICATIONS	3
MATERIALS CONSIDERED	5
ASSIGNMENT	6
SUMMARY OF MY OPINIONS	8
METHODOLOGY	8

MATERIALS RECEIVED AND RELIED ON 13

Conclusions..... 50

INTRODUCTION

1. [REDACTED]

[REDACTED]

EXPERIENCE AND QUALIFICATIONS

2. [REDACTED]

[REDACTED]

3. [REDACTED]

[REDACTED]

¹ Ex. A, Curriculum Vitae of B. Frederiksen.

[REDACTED]

4. [REDACTED]

[REDACTED]

5. [REDACTED]

[REDACTED]

6. [REDACTED]

[REDACTED]

7. [REDACTED]

[REDACTED]

8. [REDACTED]

[REDACTED]

9. [REDACTED]

[REDACTED]

[REDACTED]

10. [REDACTED]

[REDACTED]

[REDACTED]

11. [REDACTED]

[REDACTED]

[REDACTED]

12. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

CONFIDENTIALITY

13. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

MATERIALS CONSIDERED

14. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

ASSIGNMENT

15. [REDACTED]

[REDACTED]

16. [REDACTED]

[REDACTED]

² I am aware of the Court’s Order dated July 25, 2022 compelling Plaintiffs to supplement their Interrogatory No. 1 response. When Plaintiffs serve a third supplemental response, I reserve the right to amend, supplement, or provide a new or different report based on my review of that third supplemental response.

³ Plaintiffs’ Second Supplemental Responses and Objections to Defendant and Counterclaimant ROSS Intelligence, Inc.’s Interrogatory No. 1, at 10 (Mar. 23, 2022) (“Plaintiffs’ Sec. Supp. Response to Interrogatory No. 1”).

[REDACTED]

17. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

18. [REDACTED]

[REDACTED]

19. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

20. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

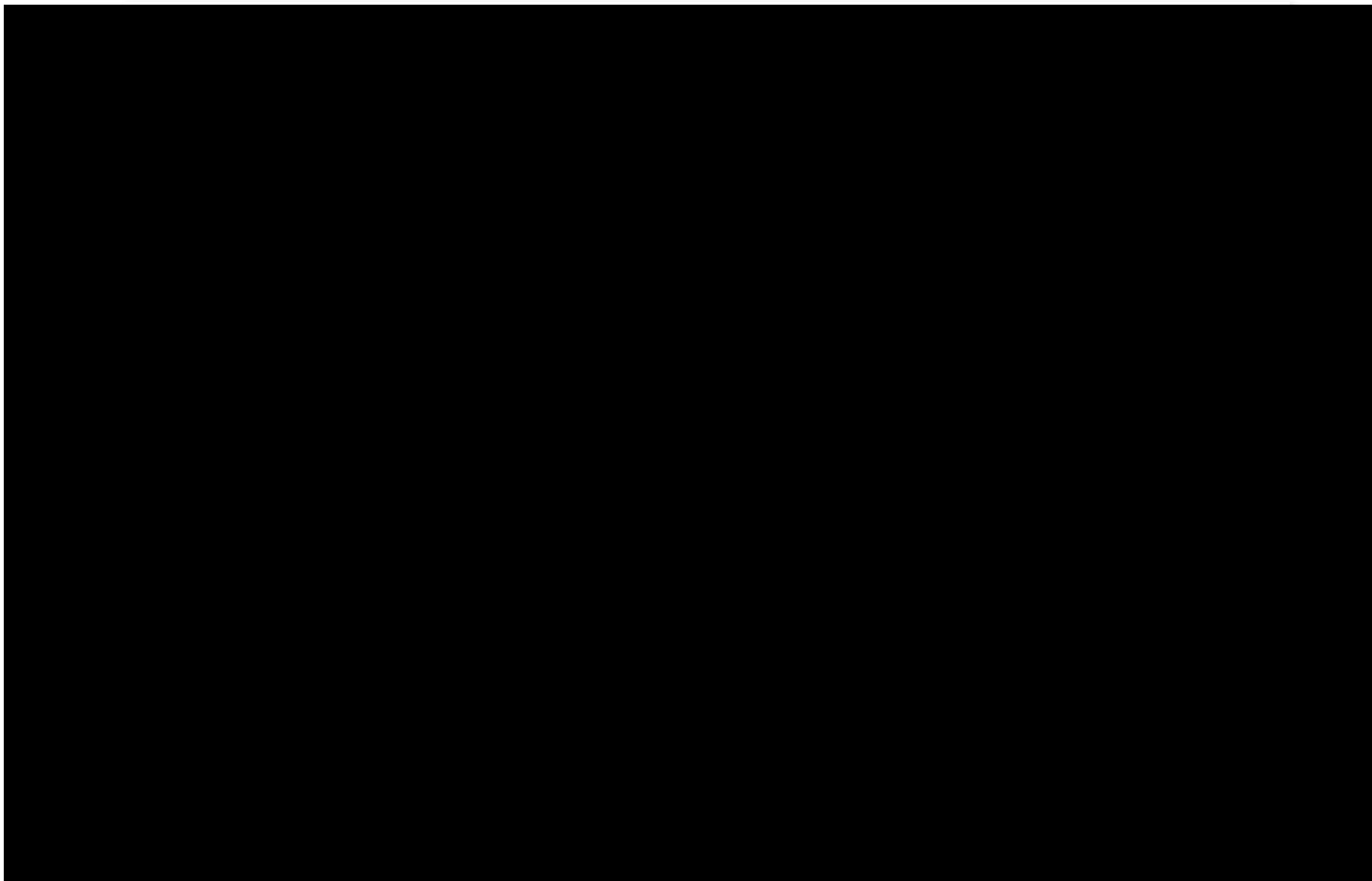
SUMMARY OF MY OPINIONS

- [REDACTED]
[REDACTED]
[REDACTED]
- [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
- [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

METHODOLOGY

21. [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]



[Redacted]

1. [Redacted]
[Redacted]
2. [Redacted]
[Redacted]
3. [Redacted]
[Redacted]
4. [Redacted]
[Redacted]
5. [Redacted]
[Redacted]

6. [REDACTED]
[REDACTED]
7. [REDACTED]
[REDACTED]
8. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
9. [REDACTED]
[REDACTED]
22. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
23. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
24. [REDACTED]
[REDACTED]

⁶ ROSS-003411169; ROSS-003332368.

⁷ Tomas van der Heijden Dep. Ex. 96 (Jan. 28, 2020) (“van der Heijden 2020 Dep.”).

⁸ van der Heijden 2020 Dep. Ex. 111.

⁹ van der Heijden 2020 Dep. Ex. 111.

¹⁰ van der Heijden 2020 Dep. 151:16 – 152:4; van der Heijden 2020 Dep. EX 111.

¹¹ van der Heijden 2020 Dep. Ex. 111.

[REDACTED]

25.

[REDACTED]

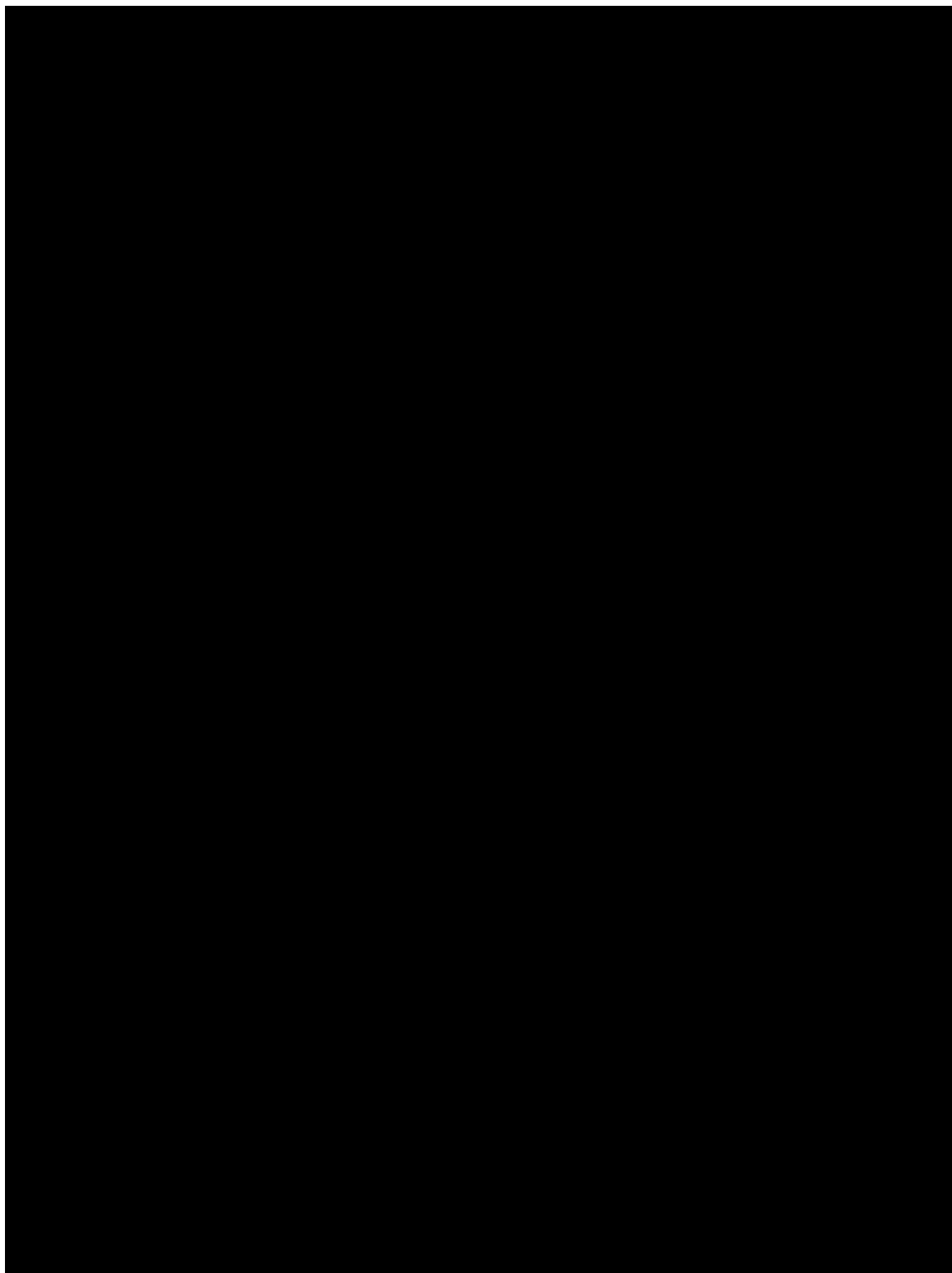
26.

[REDACTED]

¹² van der Heijden 2020 Dep. 151:16 – 152:4; van der Heijden 2020 Dep. Ex. 111.

¹³ van der Heijden 2020 Dep. 77:3-10;78:8-79:7; *see also* Deposition of Ed Walters 182:5-18 (Mar. 1, 2022) (“Walters Dep.”); ROSS-009721314.

¹⁴ ROSS-003332368.



27.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

MATERIALS RECEIVED AND RELIED ON

28.

[REDACTED]

29.

[REDACTED]

30.

[REDACTED]

31.

[REDACTED]

¹⁵ ROSS-000080391.

¹⁶ van der Heijden 2020 Dep. 254:21-255:13.

¹⁷ The list of Bate #s are identified in Exhibit G.

¹⁸ Plaintiffs' Sec. Supp. Response to Interrogatory No. 1.

[REDACTED]

[REDACTED]

32.

[REDACTED]

[REDACTED]

¹⁹ ROSS-003332368.

33. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]
34. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

35. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

36. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

37. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

²⁰ Scripts are available upon request.

38. [REDACTED]

39. [REDACTED]

40. [REDACTED]

41. [REDACTED]

42. [REDACTED]

43. [REDACTED]

²¹ \van der Heijden Dep. 82:5-8.

²² [REDACTED]

²³ Plaintiffs' Sec. Supp. Response to Interrogatory No. 1.

[REDACTED]

44. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

45. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

46. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

47. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

48. [REDACTED]

[REDACTED]

[REDACTED]

24 [REDACTED]

[REDACTED]

[REDACTED]
49. [REDACTED]
[REDACTED]

50. [REDACTED]

[REDACTED]

51. [REDACTED]
[REDACTED]
[REDACTED]

52. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

²⁵ ROSS-003332368.

53. [REDACTED]

[REDACTED]

54. [REDACTED]

[REDACTED]

55. [REDACTED]

[REDACTED]

56. [REDACTED]

[REDACTED]

57. [REDACTED]

[REDACTED]

²⁶ [REDACTED]

²⁷ See <https://github.com/BurntSushi/ripgrep>.

[REDACTED]

²⁸ A Regular Expression (or “Regex”) is a pattern (or filter) that uses a special syntax to describe criteria for matching character strings. When a particular string of characters are evaluated using a regex, the evaluation will identify whether the string matches the pattern identified by the regex. See <https://www3.ntu.edu.sg/home/ehchua/programming/howto/Regexe.html#zz-1.1> and <https://www3.ntu.edu.sg/home/ehchua/programming/howto/Regexe.html>

58. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

59. [REDACTED]
[REDACTED]

60. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

61. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]

62. [REDACTED]
[REDACTED]

63. [REDACTED]
[REDACTED]

29 [REDACTED]
[REDACTED]

[REDACTED]

64. [REDACTED]
[REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]

65. [REDACTED]
[REDACTED]
[REDACTED]

66. [REDACTED]
[REDACTED]
[REDACTED]

67. [REDACTED]
[REDACTED]
[REDACTED]

30 [REDACTED]
[REDACTED]

[REDACTED]

68. [REDACTED]

[REDACTED]

69. [REDACTED]

[REDACTED]

70. [REDACTED]

[REDACTED]

71. [REDACTED]

[REDACTED]

[REDACTED]

72. [REDACTED]

[REDACTED]

73. [REDACTED]

[REDACTED]

74. [REDACTED]

[REDACTED]

75. [REDACTED]

[REDACTED]

[REDACTED]

76. [REDACTED]

[REDACTED]

77. [REDACTED]

[REDACTED]

31 [REDACTED].

[REDACTED]

78. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

79.

[REDACTED]

80.

[REDACTED]

81.

[REDACTED]

82.

[REDACTED]

83.

[REDACTED]

32

[REDACTED]

[REDACTED]

84.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

85.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

86. [REDACTED]

[REDACTED]

87. [REDACTED]

[REDACTED]

88. [REDACTED]

[REDACTED]

89.

[REDACTED]

90.

[REDACTED]

91.

[REDACTED]

92.

[REDACTED]

33

[REDACTED]

³⁴ See Exhibit N.

[REDACTED]

93. [REDACTED]

[REDACTED]

94. [REDACTED]

[REDACTED]

[REDACTED]

95. [REDACTED]

[REDACTED]

96. [REDACTED]

[REDACTED]

97. [REDACTED]

[REDACTED]

98.

[REDACTED]

99.

[REDACTED]

100.

[REDACTED]

101.

[REDACTED]

³⁵ “Fuzzy string-matching” is a term of art used collectively for techniques that allow one to search using criteria that can identify partial matches. Instead of merely checking to determine if two strings are identical, a fuzzy string-match checks to see how similar they are and returns a numeric value that represents the degree of similarity.

102. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

103. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

104. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

105. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

106. [REDACTED]
[REDACTED]
[REDACTED]

³⁶ A character trigram is a set of three consecutive characters. It is applied as a sliding window, moving one character at a time, to identify three-letter sequences from the words in the headnote. Each word is considered to have two spaces prefixed and one space suffixed when determining the set of trigrams contained in the string. For example, the set of trigrams in the string “cat” is “c,” “ca,” “cat,” and “at.” *See*: <https://www.postgresql.org/docs/current/pgtrgm.html> (last visited July 20, 2022).. We used trigrams to measure the similarity of two strings by counting the number of unique trigrams they share, and then comparing this to the total number of unique trigrams from both strings.

[REDACTED]

107. [REDACTED]

[REDACTED]

108. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

109. [REDACTED]

[REDACTED]

110. [REDACTED]

[REDACTED]

111. [REDACTED]

[REDACTED]

112. [REDACTED]

[REDACTED]

[REDACTED]

113. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

114. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

115. [REDACTED]

[REDACTED]

[REDACTED]

116. [REDACTED]

[REDACTED]

³⁷ [REDACTED]

³⁸ I note while most of Plaintiffs' documents had multiple headnotes, some of the documents do not have any headnotes.

³⁹ TR-0844854 at TR-0844854_00010.jpg

[REDACTED]

117.

[REDACTED]

118.

[REDACTED]

[REDACTED]

40

[REDACTED]

⁴¹ Nathaniel Gustafon, *et al*, *Nowhere to Hide: Finding Plagiarized Documents Based on Sentence Similarity*, In Proceedings of the 28 IEEE/WIC/ACM Int'l Conference on Web Intell., (Dec. 9, 2008), available at <https://scholarsarchive.byu.edu/cgi/viewcontent.cgi?article=1149&context=facpub> (last visited July 31, 2022).

[REDACTED]

119. [REDACTED]

[REDACTED]

[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]

[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]

120. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

⁴² Christopher Fox, *A Stop List for General Text*, <https://dl.acm.org/doi/pdf/10.1145/378881.378888> (last visited July 30, 2022)

⁴³ The list from the 1989 Fox paper does not include the words: “am,” “below,” “doing,” “hers,” “ours,” “ourselves,” “theirs,” “themselves,” “whom,” “yourself,” and “yourselves.” It does, however, include variations, roots, and/or synonyms for all of these words, i.e. the words: “are,” “under,” “do,” “his,” “not,” “our,” “their,” “them,” “who,” and “your” are all included in the Fox paper.

⁴⁴ Adam D. Troy & Guo Qiang Zhang, *Enhancing Relevance Scoring with Chronological Term Rank*, <https://lintool.github.io/robust04-analysis-papers/p599-troy.pdf> (last visited Aug. 1, 2022); Martin Potthast, *et al*, *Overview of the 2nd Inter’l Competition on Plagiarism Detection*, <https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.174.2205&rep=rep1&type=pdf> (last visisted Aug. 1, 2022); *see also* Gustafson, *supra* 41.

[REDACTED]

121. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

122. [REDACTED]

[REDACTED]

[REDACTED]

123. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

124. [REDACTED]

[REDACTED]

[REDACTED]

⁴⁵ See also https://raw.githubusercontent.com/nltk/nltk_data/gh-pages/packages/corpora/stopwords.zip (last visited July 30, 2022).

⁴⁶ [REDACTED]

[REDACTED]

125. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

126. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

127. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

128. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

⁴⁷ <https://www.analyticsvidhya.com/blog/2021/06/fuzzywuzzy-python-library-interesting-tool-for-nlp-and-text-analytics/> (last visited July 31, 2022). Source code is available at <https://github.com/seatgeek/fuzzywuzzy>. (last visited July 31, 2022).

129. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]		
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]

130. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]		
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]



[REDACTED]

131. [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]

132. [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

133. [REDACTED]

[REDACTED]
[REDACTED]

134. [REDACTED]

[REDACTED]
[REDACTED]

⁴⁸ Trigram - another term for *trigraph* - a group of three consecutive written units such as letters, syllables, or words. (Google, quoting a linguistics definition from <https://languages.oup.com/google-dictionary-en/>).

⁴⁹ Alberto Barr'ón-Cedeño and Paolo Rosso *On Automatic Plagiarism Detection Based on n-Grams Comparison* (2009), <https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.459.2488&rep=rep1&type=pdf>

[REDACTED]

135. [REDACTED]

136. [REDACTED]

f; Eva Y Puspaningrum *et al*, 2020 J. Phys.: Conf. Ser. 1569, *Detection of Text Similarity for Indication Plagiarism Using Winnowing Algorithm Based K-gram and Jaccard Coefficient* (2019), https://www.researchgate.net/publication/343185747_Detection_Of_Text_Similarity_For_Indication_Plagiarism_Using_Winnowing_Algorithm_Based_K-Gram_And_Jaccard_Coefficient.⁵⁰ <https://www.postgresql.org/docs/9.1/pgtrgm.html> (last visited July 31, 2022).

51 [REDACTED]

52 [REDACTED]

⁵³ The PostgreSQL “ceiling” function (“CEIL”) rounds up its argument and returns the smallest whole number greater than the argument. For example, CEIL (3.1459) returns 4.0. *See* <https://www.w3resource.com/PostgreSQL/ceil-function.php> (last visited July 22, 2022).

[REDACTED]

137. [REDACTED]

- [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
- [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
- [REDACTED]
[REDACTED]

138. [REDACTED]
























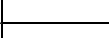

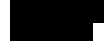












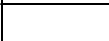

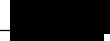


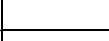

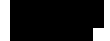
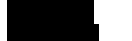











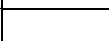






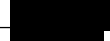


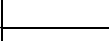

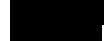
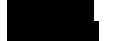











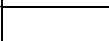









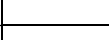

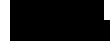




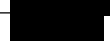


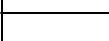

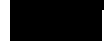







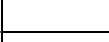

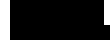










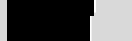



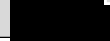





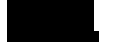



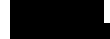




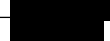


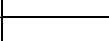

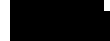
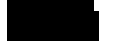



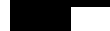




[REDACTED]
[REDACTED]

Findings

139. [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

54 [REDACTED]

[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

141. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

142. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

- [REDACTED]
[REDACTED]
- [REDACTED]
[REDACTED]
[REDACTED]

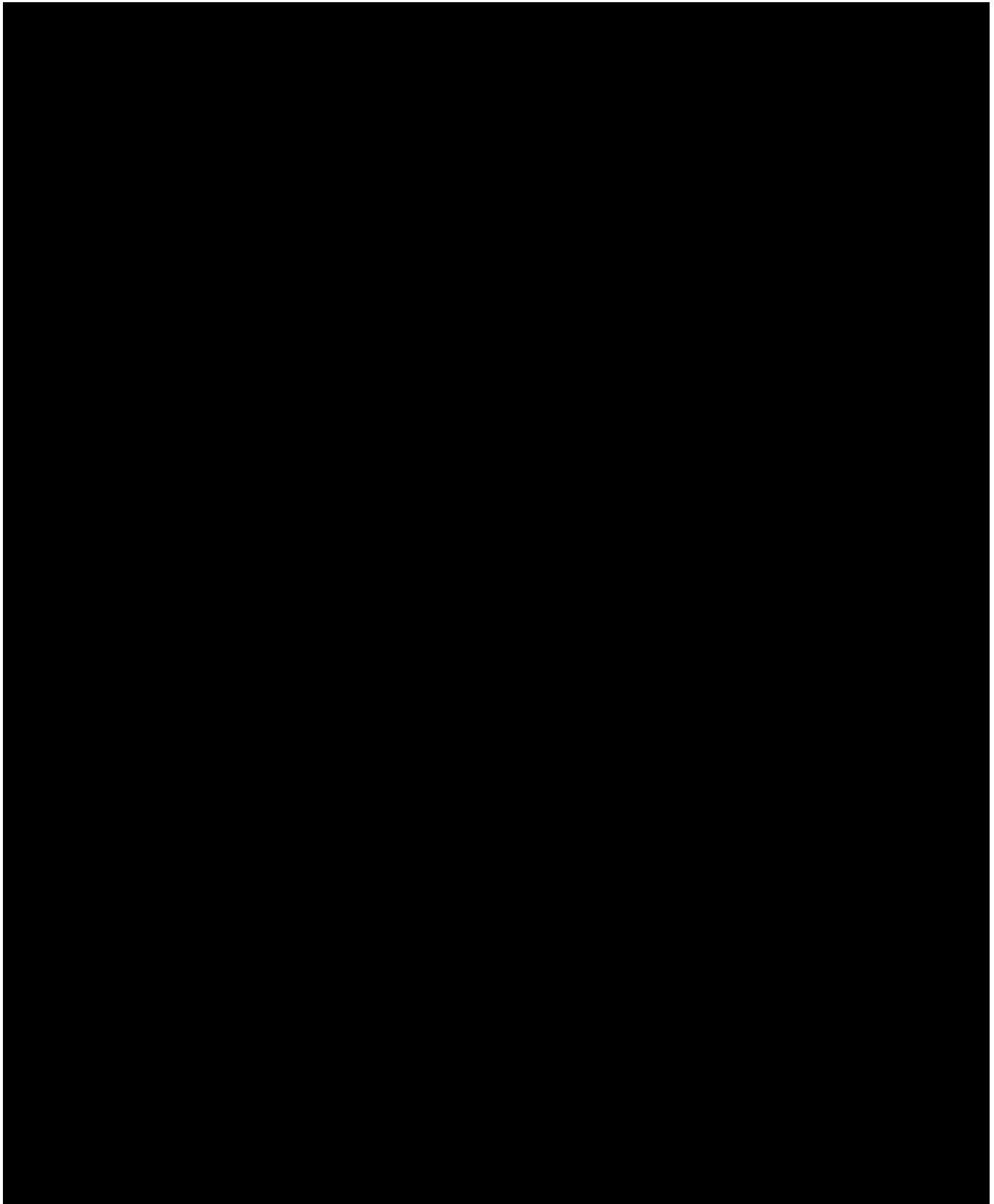
[REDACTED]

[REDACTED]

146. [REDACTED]
[REDACTED]
[REDACTED]

The diagram consists of a grid of squares, some of which are colored black, white, or grey. The grid is divided into several sections by horizontal and vertical lines. The top section is a large black rectangle. Below it, there are several rows of squares, some of which are white or grey. The bottom section is a large black rectangle. The overall pattern is complex and appears to be a data visualization or a game board.

[illegible]

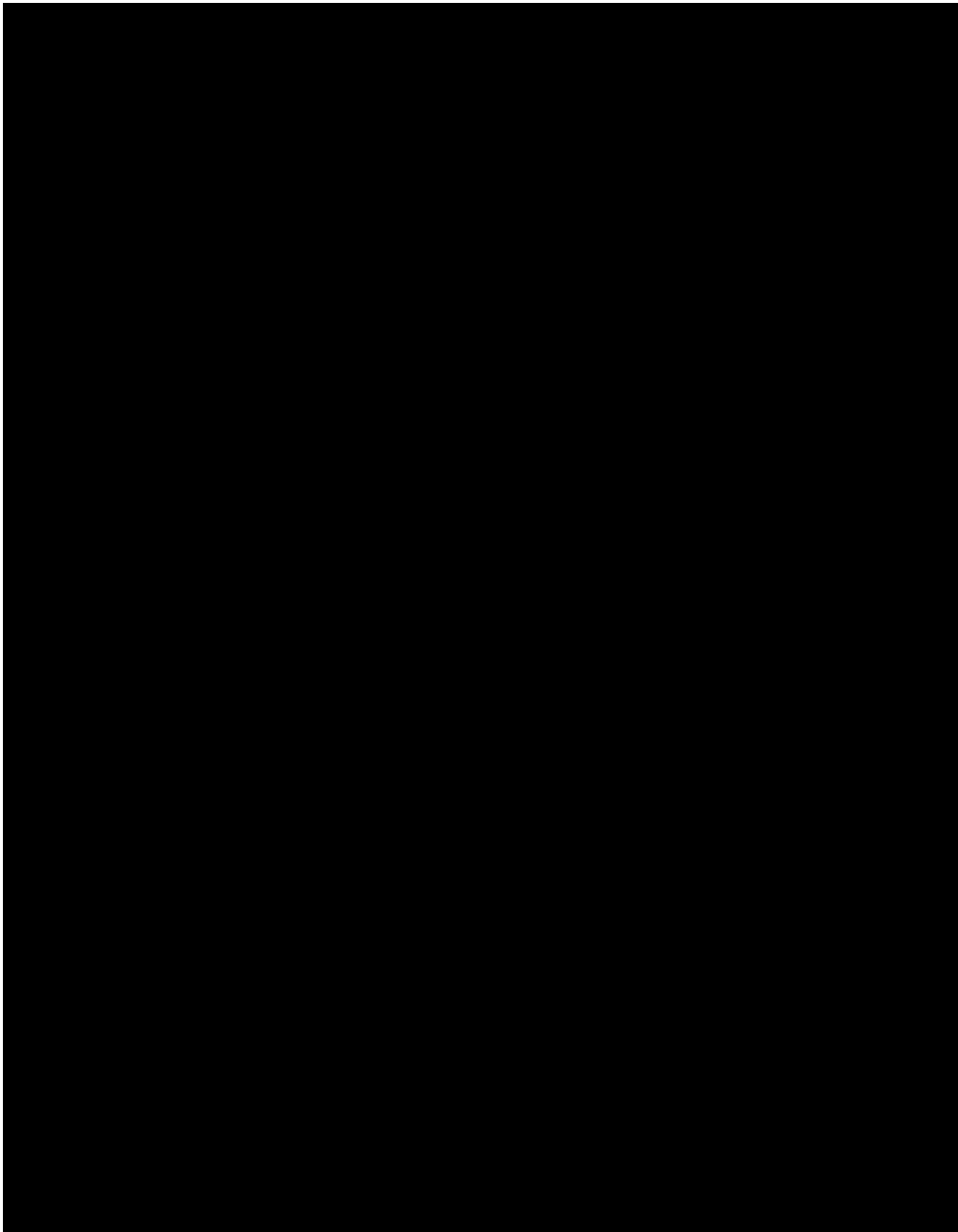


147.

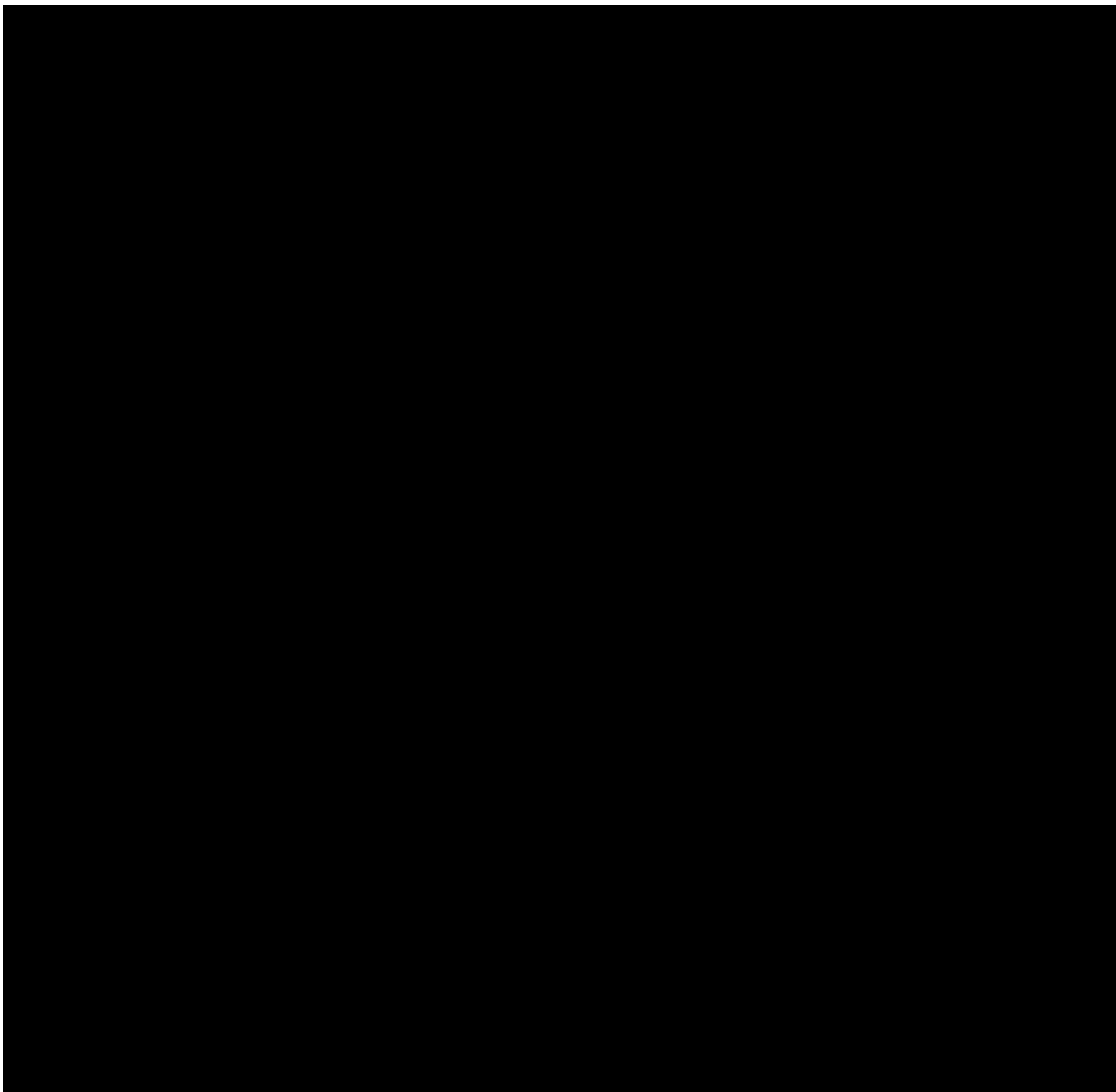
148.

150.

[illegible]



CONFIDENTIAL



151. [REDACTED]
[REDACTED]

Conclusions

152. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]

153. [REDACTED]

[REDACTED]

Date: August 1, 2022

Barbara A. Frederiksen-Cross

Barbara Frederiksen-Cross
Director, Litigation Services
JurisLogic LLC

EXHIBIT AP

**IN THE UNITES STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

THOMSON REUTERS ENTERPRISE)	
CENTRE GMBH and WEST PUBLISHING)	
CORPORATION,)	
	)	C.A. No. 20-613-SB
Plaintiffs/ Counter defendants)	
	)	CONFIDENTIAL, HIGHLY
v.	)	CONFIDENTIAL – ATTORNEYS’
	)	EYES ONLY
ROSS INTELLIGENCE INC.,)	
)	
Defendant/ Counterclaimant.)	

REBUTTAL REPORT OF BARBARA FREDERIKSEN-CROSS

Table of Contents

INTRODUCTION 3

EXPERIENCE AND QUALIFICATIONS 3

MATERIALS CONSIDERED 4

SUMMARY OF MY OPINIONS 4

BASIS OF MY OPINIONS 8

FLAWS AND INCONSISTENCIES IN THE KREIN REPORT 8

[REDACTED]

CONCLUSIONS 46

INTRODUCTION

1. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

EXPERIENCE AND QUALIFICATIONS

2. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
3. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
4. [REDACTED]
[REDACTED]
[REDACTED]
5. [REDACTED]
[REDACTED]
[REDACTED]

6. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

CONFIDENTIALITY

7. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

MATERIALS CONSIDERED

8. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

SUMMARY OF MY OPINIONS

9. [REDACTED]
[REDACTED]
[REDACTED]

a) [REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]

b) [REDACTED]

[REDACTED]

10. [REDACTED]

[REDACTED]

11. [REDACTED]

[REDACTED]

a) [REDACTED]

[REDACTED]

b) [REDACTED]

[REDACTED]

- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- c) [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- d) [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]

12. [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]

13. [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]

14. [REDACTED]
- [REDACTED]

[REDACTED]

15. [REDACTED]

[REDACTED]

BASIS OF MY OPINIONS

16. [REDACTED]
[REDACTED]

FLAWS AND INCONSISTENCIES IN THE KREIN REPORT

[REDACTED]
17. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

18. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]
19. [REDACTED]
[REDACTED]

20. [REDACTED]
[REDACTED]

[REDACTED]

21. [REDACTED]

[REDACTED]

22. [REDACTED]

[REDACTED]

23. [REDACTED]

[REDACTED]

¹ Tr. Teri Whitehead (2022-04-18) 129:18-23; 133:9-21; *see also* Tr. Tariq Hafeez (2022-05-26) 61:18-24 [REDACTED]; 63:10-17.

² Tr. Tariq Hafeez (2022-05-26) 72:25-73:2.

³ [REDACTED]

24. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

⁴ Norkin v. United States Fire Ins. Co. 237 Cal. App. 2d 435 (1965).

⁵ Krein Report, Appendix C, page 652

⁶ TR-0818184

⁷ Norkin v. United States Fire Ins. Co., 237 Cal. App. 2d 435 (1965).

[REDACTED]

25. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

26. [REDACTED]
[REDACTED]

27. [REDACTED]
[REDACTED]

28. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

⁸ TR-0818184 and Norkin v. United States Fire Ins. Co., 237 Cal. App. 2d 435 (1965). [REDACTED]
[REDACTED]

⁹ Krein Report, FN 162
¹⁰ Krein Report, FN 162

29. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

30. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

31. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

32. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

33. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

¹¹ Krein Report, FN 162

¹² Krein Report, FN 162

[REDACTED]

34. [REDACTED]

[REDACTED]

35. [REDACTED]

[REDACTED]

36. [REDACTED]

[REDACTED]

37. [REDACTED]

[REDACTED]

¹³ Krein Report, FN 162

¹⁴ Krein report, ¶112

[REDACTED]

38. [REDACTED]

[REDACTED]

39. [REDACTED]

[REDACTED]

40. [REDACTED]

[REDACTED]

41. [REDACTED]

[REDACTED]

42. [REDACTED]

[REDACTED]

43. [REDACTED]

[REDACTED]

44.

[REDACTED]

45.

[REDACTED]

[REDACTED]

46.

[REDACTED]

47.

[REDACTED]

48.

[REDACTED]

¹⁵ Krein Report, FN 162

[REDACTED]

49. [REDACTED]

[REDACTED]

50. [REDACTED]

[REDACTED]

[REDACTED]

16 [REDACTED]

[REDACTED]

51.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

17

[REDACTED]

[REDACTED]

52.

[REDACTED]

53.

[REDACTED]

54.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

55.

[REDACTED]

[REDACTED]

[REDACTED]

56.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

57.

[REDACTED]

58.

[REDACTED]

59.

[REDACTED]

60.

[REDACTED]

61.

[REDACTED]

[REDACTED]

[REDACTED]

62. [REDACTED]

[REDACTED]

[REDACTED]

63. [REDACTED]

[REDACTED]

[REDACTED]

64. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

65. [REDACTED]

[REDACTED]

66. [REDACTED]

[REDACTED]

[REDACTED]

67. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

²⁰ Krein Report, FN 162

68.

[REDACTED]

69.

[REDACTED]

70.

[REDACTED]

[REDACTED]

²¹ LEGALEASE-00000204 – 00000205

[REDACTED]

71.

[REDACTED]

[REDACTED]

[REDACTED]

72.

[REDACTED]

[REDACTED]

[REDACTED]

22

[REDACTED]

[REDACTED]

73.

[REDACTED]

74.

[REDACTED]

[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
------------	------------	------------	------------	------------	------------

[REDACTED]

[REDACTED]

75. [REDACTED]

[REDACTED]

76. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

77.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

79.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

80.

[REDACTED]

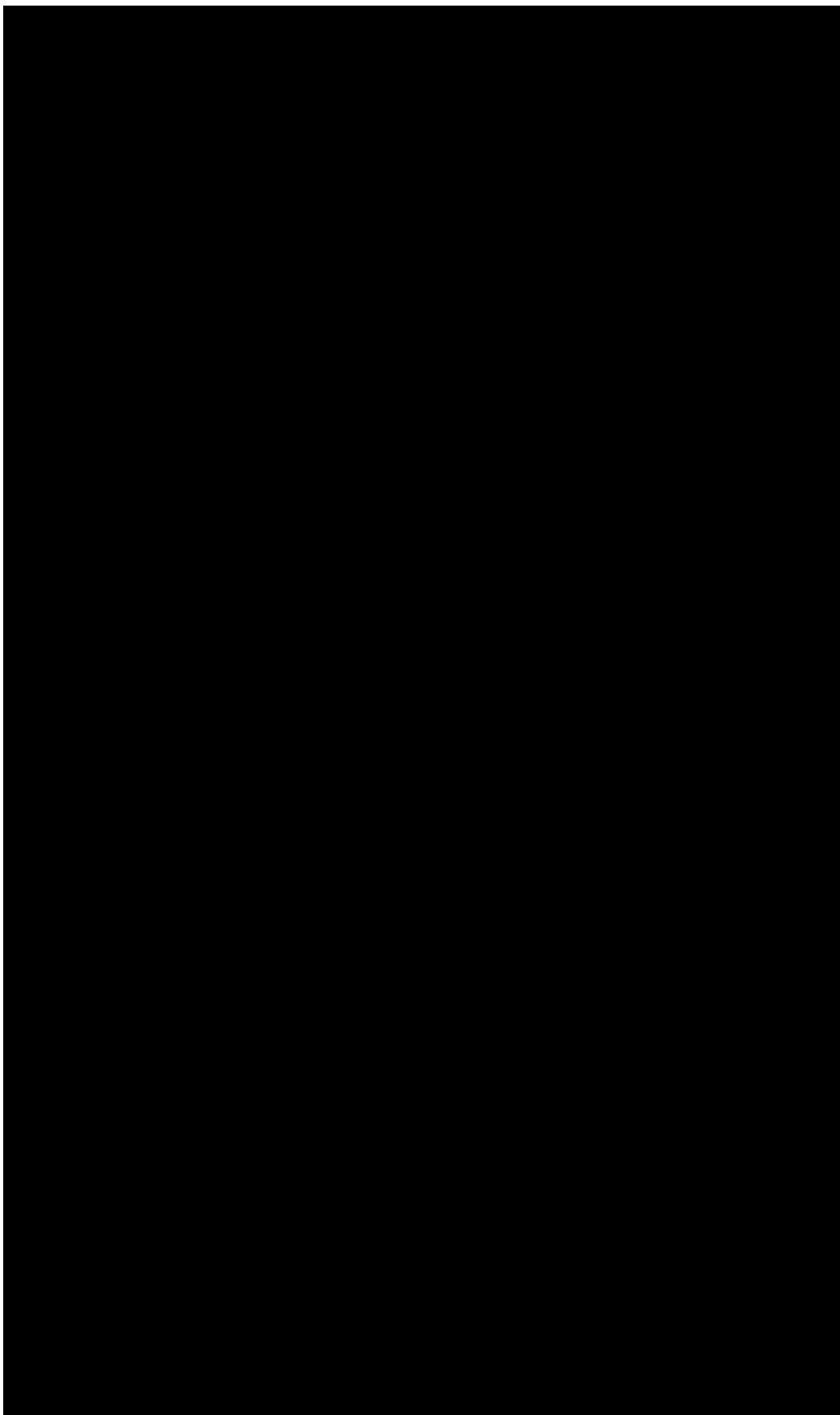
[REDACTED]

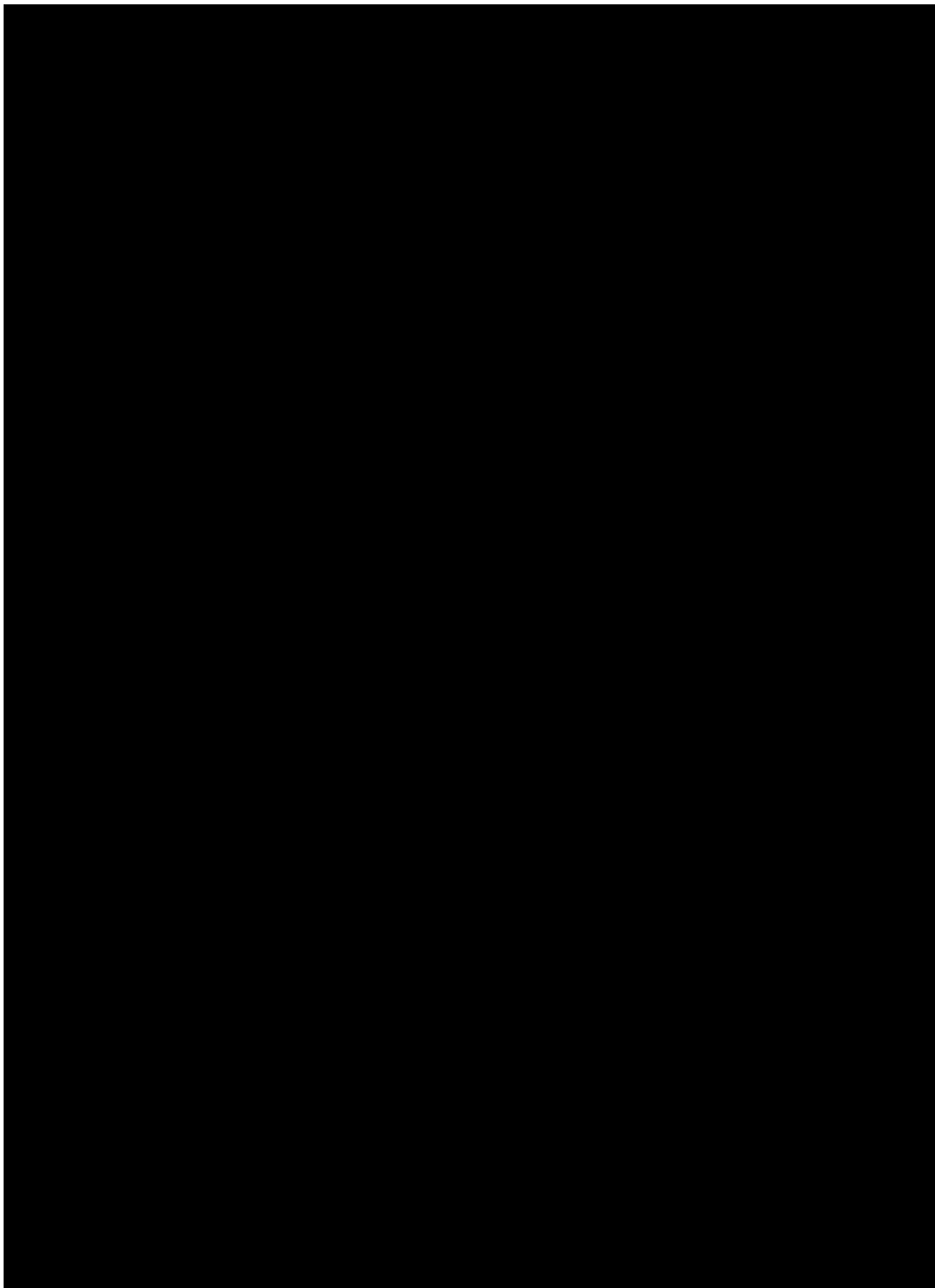
[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]





[REDACTED]

81.

[REDACTED]

82.

[REDACTED]

[REDACTED]

83.

[REDACTED]

[REDACTED]

84.

[REDACTED]

85.

[REDACTED]

86.

[REDACTED]

[REDACTED]

87. [REDACTED]

[REDACTED]

[REDACTED]

88. [REDACTED]

[REDACTED]

89. [REDACTED]

[REDACTED]

[REDACTED]

90. [REDACTED]

[REDACTED]

[REDACTED]

91. [REDACTED]

[REDACTED]

[REDACTED]

24 [REDACTED]

25 [REDACTED]

26 [REDACTED]

92.

[REDACTED]

93.

[REDACTED]

94.

[REDACTED]

95.

[REDACTED]

96.

[REDACTED]

97.

[REDACTED]

²⁹

[REDACTED]

³⁰ ROSS-003287488-3287489

³¹

[REDACTED]

³² TR-0541943

[REDACTED]

[REDACTED]

98.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

99.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

100.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

101.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

³³ Krein ¶ 113

³⁴ Krein ¶¶ 113-114

[REDACTED]

102. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

103. [REDACTED]

[REDACTED]

[REDACTED]

104. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

³⁵ Krein Report, ¶109 and footnote 157

³⁶ Krein ¶113-114

³⁷ Krein report at ¶ 113.

³⁸ TR-0179847-TR-0179854

³⁹ ROSS-010128683.xlsx

⁴⁰ Krein para 113 and footnotes 163 and 165

105. [REDACTED]
[REDACTED]
[REDACTED]

106. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

107. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

108. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

109. [REDACTED]
[REDACTED]
[REDACTED]

⁴¹ TR-0526552 - [REDACTED]

⁴² TR-0891659

[REDACTED]

110.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

⁴³ Krein Report, ¶114 (emphasis added)

⁴⁴ See

[REDACTED]

111.

[REDACTED]

[REDACTED]

112.

[REDACTED]

113.

[REDACTED]

⁴⁵

⁴⁶ Tr. Tariq Hafeez (202-05-26) p. 131:9-21

[REDACTED]

[REDACTED]

114.

[REDACTED]

[REDACTED]

[REDACTED]

115.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

116.

[REDACTED]

[REDACTED]

⁴⁷ Tr. Tariq Hafeez (202-05-26) p. 226:20-227:12

⁴⁸ CASEMAKER_051021

⁴⁹ Tr. Jimoh Ovbiagele, 129:22-130:3, 131:5-133:6

⁵⁰ Tr. Pargles Dall'Oglia (date) 146:5-11 and 153:18-24

[REDACTED]

117. [REDACTED]

[REDACTED]

[REDACTED]

118. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

119. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

120. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

121. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

122. [REDACTED]

[REDACTED]

[REDACTED]

123. [REDACTED]

[REDACTED]

124. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

- [REDACTED]
[REDACTED]
[REDACTED]
- [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
- [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
- [REDACTED]
[REDACTED]

⁵² TR-51495.xlsx, TR-76478.xlsx, TR-150248.xlsx, TR-161192.xlsx, and TR-165320.xlsx

- [REDACTED]

125.

[REDACTED]

126.

[REDACTED]

⁵³ TR-0117710.XLSX, TR-0163965.XLSX, TR-0171847.XLSX, TR-0171861.XLSX, TR-0171868.XLSX, TR-0177932.XLSX, TR-0178469.XLSX

⁵⁴ Tr. Teri Whitehead (2022-04-18) 82:12-14; T. Hafeez (2022-05-26) 238:25-239:1-5.

⁵⁵ See e.g. Tr. Christopher Cahn (2022-05-12) 97:14-24, Tr. Christopher Cahn (2022-05-12) 210:22-211:10 and Tr. Christopher Cahn (2022-05-12) 112:16-113:11

[REDACTED]
[REDACTED]

127. [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]

128. [REDACTED]

[REDACTED]
[REDACTED]

a) [REDACTED]

b) [REDACTED]
[REDACTED]
[REDACTED]

c) [REDACTED]
[REDACTED]

129. [REDACTED]

[REDACTED]

[REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED]

130. [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]

131.

[REDACTED]

132.

[REDACTED]

133.

[REDACTED]

134.

[REDACTED]

135.

[REDACTED]

⁵⁶ Based on an algorithmic ranking score of 1 or 2

⁵⁷ I.e., a ranking score of 4 or 5.

⁵⁸ Based on an algorithmic ranking score of 1 or 2

⁵⁹ Based on an algorithmic ranking score of 1 or 2

[REDACTED]

CONCLUSIONS

136. [REDACTED]

[REDACTED]

137. [REDACTED]

[REDACTED]

138. [REDACTED]

[REDACTED]

139. [REDACTED]

[REDACTED]

[REDACTED]

Date: September 6, 2022

Barbara A. Frederiksen-Cross

Barbara Frederiksen-Cross
Director, Litigation Services
JurisLogic LLC

EXHIBIT AQ

FOR THE DISTRICT OF DELAWARE

)
)
)
)
)
)
)
)
)
)

CONFIDENTIAL, HIGHLY
CONFIDENTIAL – ATTORNEYS’
EYES ONLY

HIGHLY CONFIDENTIAL – ATTORNEYS’ EYES ONLY

TABLE OF CONTENTS

Introduction..... 3

Experience and Qualifications 3

Materials Considered 3

Confidentiality 3

Summary of My Opinions 4



INTRODUCTION

1. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

EXPERIENCE AND QUALIFICATIONS

2. [REDACTED]

MATERIALS CONSIDERED

3. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

CONFIDENTIALITY

4. [REDACTED]

[REDACTED]

Highly Confidential – Attorneys’ Eyes Only

[REDACTED]

SUMMARY OF MY OPINIONS

5. [REDACTED]

[REDACTED]

6. [REDACTED]

[REDACTED]

7. [REDACTED]

[REDACTED]

¹ Rebuttal Report, paragraph 15.

8. [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

9. [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

I. [REDACTED]
[REDACTED]

10. [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

Highly Confidential – Attorneys’ Eyes Only

[REDACTED]

11. [REDACTED]

[REDACTED]

12. [REDACTED]

[REDACTED]

13. [REDACTED]

[REDACTED]

² Rebuttal Report, paragraph 15.

³ Rebuttal Report, paragraph 134.

Highly Confidential – Attorneys’ Eyes Only

[REDACTED]

14. [REDACTED]

[REDACTED]

[REDACTED]

15. [REDACTED]

[REDACTED]

16. [REDACTED]

[REDACTED]

Highly Confidential – Attorneys’ Eyes Only

17. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

18. [REDACTED]
[REDACTED]
[REDACTED]

19. [REDACTED]
[REDACTED]
[REDACTED]

20. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

⁴ [REDACTED]
[REDACTED]

⁵ Krein II, paragraphs 62, 70, and footnote 82; *see also* Exhibit L, [REDACTED]

⁶ *See* Hafeez Dep. Tr. 63:6-25; 78:15-17; Hafeez Dep., Ex. 3, LEGALEASE-00078067; Hafeez Dep., Ex. 33, R-LEGALEASE-00050673; Teri Whitehead Dep. Tr. 127:5-18, Whitehead Dep., Ex. 3, LEGALEASE-00078065; Christopher Cahn Dep. Tr. 62:21-63:21; 64:22-65:13; 86:23-87:9; Cahn Dep., Ex. 9, TR-0045731; Cahn Dep., Ex. 16, TR-0047926.

Highly Confidential – Attorneys’ Eyes Only

[REDACTED]

21. [REDACTED]

22. [REDACTED]

⁷ Hafeez Dep. Ex. 3

⁸ Hafeez Depo Tr. pp. 52-54, 61, 63, 153, 267, 295 and Hafeez Ex 33, EX 35, EX 43, EX 44 EX 57; Whitehead EX 43

⁹ Krein I, Appendix C [REDACTED]

¹⁰ Reply Report, paragraph 73-74, 79, and 128-129

Highly Confidential – Attorneys’ Eyes Only

[REDACTED]

23. [REDACTED]

[REDACTED]
[REDACTED]

24. [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

25. [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

26. [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

¹¹ In Krein I, footnote 162, Krein says [REDACTED]

[REDACTED]
[REDACTED]

Highly Confidential – Attorneys’ Eyes Only

27. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

28. [REDACTED]
[REDACTED] [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

29. [REDACTED]
[REDACTED]
[REDACTED] [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

¹² In Krein II, paragraph 99 and footnote 131, [REDACTED]
[REDACTED] I.

¹³ Krein I, footnote 162 describes [REDACTED]
[REDACTED] Krein I, Appendix C.

Highly Confidential – Attorneys’ Eyes Only

[REDACTED]

30. [REDACTED]

[REDACTED]

[REDACTED]

31. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

32. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

33. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

¹⁴ Krein I, paragraph 112 and footnote 162.

¹⁵ Krein II, paragraph 108

Highly Confidential – Attorneys’ Eyes Only

[REDACTED]

34. [REDACTED]

[REDACTED]

[REDACTED]

35. [REDACTED]

[REDACTED]

36. [REDACTED]

[REDACTED]

¹⁶ Krein II, paragraph 103

Highly Confidential – Attorneys’ Eyes Only

[REDACTED]

37. [REDACTED]

[REDACTED]

[REDACTED]

38. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

39. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

40. [REDACTED]

[REDACTED]

[REDACTED]

41. [REDACTED]

[REDACTED]

[REDACTED]

42. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

43. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Highly Confidential – Attorneys’ Eyes Only

[REDACTED]

[REDACTED]

[REDACTED]

¹⁷ [REDACTED]

[REDACTED]

Highly Confidential – Attorneys’ Eyes Only

[REDACTED]

44. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

45. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

46. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

¹⁸ Krein Rebuttal Report, ¶102 & ¶105.

¹⁹ Krein Rebuttal Report, ¶102.

Highly Confidential – Attorneys’ Eyes Only

[REDACTED]

47. [REDACTED]
[REDACTED]
[REDACTED]

48. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

²⁰ [REDACTED] *See, e.g.,* Krein Rebuttal Report, ¶83. *See also* his fn 91.

²¹ [REDACTED]
[REDACTED]
[REDACTED] (Krein Opening Report, footnote 162)

²² Krein Opening Report, ¶104.

Highly Confidential – Attorneys’ Eyes Only

49.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

50.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

²³ Krein Opening Report, ¶112.

²⁴ Krein Opening Report, ¶112.

²⁵ Krein II, paragraph 110

²⁶ [REDACTED]

²⁷ [REDACTED]

[REDACTED]

Highly Confidential – Attorneys’ Eyes Only

[REDACTED]

51. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

52. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

53. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

54. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

Highly Confidential – Attorneys’ Eyes Only

[REDACTED]

55. [REDACTED]

[REDACTED]

56. [REDACTED]

[REDACTED]

[REDACTED]

--	--	--	--	--	--

²⁸ Krein I, footnote 162

²⁹ Krein II, paragraph 104. Krein says: [REDACTED]

³⁰ Krein II, paragraph 104

³¹ [REDACTED]

³² [REDACTED]

Highly Confidential – Attorneys’ Eyes Only

[REDACTED]

57. [REDACTED]

58. [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED] [REDACTED] [REDACTED]

59. [REDACTED]

[REDACTED]

[REDACTED]

33 [REDACTED]

Highly Confidential – Attorneys’ Eyes Only

[REDACTED]

60. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

61. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

³⁴ See <https://www.postgresql.org/docs/current/pgtrgm.html>.

³⁵ Krein II, paragraph 106

³⁶ Krein II, paragraph 107

Highly Confidential – Attorneys’ Eyes Only

[REDACTED]

62.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

63.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Highly Confidential – Attorneys’ Eyes Only

[REDACTED]

64.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

65.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

³⁷

(Krein Rebuttal Report, ¶100).

Highly Confidential – Attorneys’ Eyes Only

[REDACTED]

[REDACTED]

[REDACTED]

66. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

67. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

³⁸ Krein Rebuttal Report, paragraph 108.

Highly Confidential – Attorneys’ Eyes Only

[REDACTED]

68.

[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED] [REDACTED] [REDACTED]

69.

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

70.

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

71.

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

Highly Confidential – Attorneys’ Eyes Only

[REDACTED]

[REDACTED]

72. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

73. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

74. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

³⁹ Opening Report, paragraph 144

Highly Confidential – Attorneys’ Eyes Only

[REDACTED]

75. [REDACTED]

[REDACTED]

⁴⁰ [REDACTED]

⁴¹ Opening Report, paragraph 16

⁴² Plaintiffs’ Third Supplemental Response to ROSS’s Interrogatory No. 1.

Highly Confidential – Attorneys’ Eyes Only

[REDACTED]

76. [REDACTED]

[REDACTED]

77. [REDACTED]

[REDACTED]

[REDACTED]

78. [REDACTED]

[REDACTED]

79. [REDACTED]

[REDACTED]

[REDACTED]

80. [REDACTED]

[REDACTED]

81. [REDACTED]

[REDACTED]

⁴³ TR-0841568

Highly Confidential – Attorneys’ Eyes Only

[REDACTED]

82. [REDACTED]

[REDACTED]

[REDACTED]

83. [REDACTED]

[REDACTED]

⁴⁴ Krein I, Appendix C, at row 1684

⁴⁵ [REDACTED]

Highly Confidential – Attorneys’ Eyes Only

84. [REDACTED]

[REDACTED]

85. [REDACTED]

[REDACTED]

86. [REDACTED]

[REDACTED]

87. [REDACTED]

[REDACTED]

88. [REDACTED]

⁴⁶ Krein Rebuttal Report, ¶81. [REDACTED]

Highly Confidential – Attorneys’ Eyes Only

[REDACTED]

89. [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

90. [REDACTED]

[REDACTED]

[REDACTED]

91. [REDACTED]

[REDACTED]
[REDACTED]

⁴⁷ [REDACTED]
[REDACTED]

Highly Confidential – Attorneys’ Eyes Only

[REDACTED]

[REDACTED]

92.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

93.

[REDACTED]

[REDACTED]

Highly Confidential – Attorneys’ Eyes Only

[REDACTED]

94. [REDACTED]

[REDACTED]

[REDACTED]

95. [REDACTED]

[REDACTED]

[REDACTED]

96. [REDACTED]

[REDACTED]

[REDACTED]

Highly Confidential – Attorneys’ Eyes Only

97.

[REDACTED]

98.

[REDACTED]

[REDACTED]

99.

[REDACTED]

[REDACTED]

Highly Confidential – Attorneys’ Eyes Only

[REDACTED]

100. [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

101. [REDACTED]

[REDACTED]

102. [REDACTED]

[REDACTED]

103. [REDACTED]

[REDACTED]
[REDACTED]

Highly Confidential – Attorneys’ Eyes Only

[REDACTED]

104. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

105. [REDACTED]
[REDACTED]
[REDACTED]

48 [REDACTED]
[REDACTED]

Highly Confidential – Attorneys’ Eyes Only

106. [REDACTED]
[REDACTED]
[REDACTED]

107. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

108. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

109. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

110. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

49 [REDACTED]
50 [REDACTED]

Highly Confidential – Attorneys’ Eyes Only

[REDACTED]

[REDACTED]

111.

[REDACTED]

112.

[REDACTED]

113.

[REDACTED]

Highly Confidential – Attorneys’ Eyes Only

[REDACTED]

114. [REDACTED]

[REDACTED]

115. [REDACTED]

[REDACTED]

116. [REDACTED]

[REDACTED]

117. [REDACTED]

[REDACTED]

[REDACTED]

118. [REDACTED]

[REDACTED]

⁵¹ [REDACTED]

⁵² Krein Rebuttal Report, ¶114.

⁵³ Krein Rebuttal Report, ¶112-¶113.

Highly Confidential – Attorneys’ Eyes Only

119. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

120. [REDACTED]
[REDACTED]

121. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

122. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]

⁵⁴ Barb’s Rebuttal Report, ¶130. See also its Exhibits L and M.

⁵⁵ Krein Rebuttal Report, paragraph 102.

Highly Confidential – Attorneys’ Eyes Only

[REDACTED]

123.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

124.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Highly Confidential – Attorneys’ Eyes Only

[REDACTED]

[REDACTED]

125. [REDACTED]

126. [REDACTED]

127. [REDACTED]

Highly Confidential – Attorneys’ Eyes Only

[REDACTED]

128. [REDACTED]

[REDACTED]

129. [REDACTED]

[REDACTED]

[REDACTED]

130. [REDACTED]

[REDACTED]

[REDACTED]

⁵⁶ Krein Rebuttal Report, ¶114.

Highly Confidential – Attorneys’ Eyes Only

[REDACTED]

131. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

132. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

133. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Highly Confidential – Attorneys’ Eyes Only

[REDACTED]

134. [REDACTED]

[REDACTED]

135. [REDACTED]

[REDACTED]

⁶⁰ Third Supplemental Response, Aug. 22, 2022, at 70

⁶¹ *Id*

⁶³ Frederiksen-Cross Rebuttal Report, paragraph 128-129.

Highly Confidential – Attorneys’ Eyes Only

136.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

137.

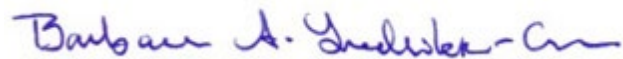
[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Date: October 10, 2022



Barbara Frederiksen-Cross

Director, Litigation Services

JurisLogic LLC

64

65

66

Exhibits H and I.

Krein I Appendix C

EXHIBIT AR

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

THOMSON REUTERS ENTERPRISE)	
CENTRE GMBH and WEST PUBLISHING)	
CORPORATION,)	
)	
Plaintiffs and	)	C.A. No. 20-613-LPS
Counterdefendants,)	
)	
v.)	
)	
ROSS INTELLIGENCE INC.,)	
)	
Defendant and)	
Counterclaimant.)	

OPENING EXPERT REPORT OF DR. JONATHAN L. KREIN
HIGHLY CONFIDENTIAL - ATTORNEYS EYES ONLY

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

TABLE OF CONTENTS

1.	Introduction	1
2.	Summary of Opinions	2
3.	Background and Expert Qualifications	3
3.1	Education, Industry, and Professional Experience	8
3.2	Research and Teaching Experience	10
4.	Retention and Compensation	12
5.	Summary of Materials and Information Considered	12
6.	Legal Standards Applied in this Expert Report	13
7.	Relevant Technologies	16
7.1	Artificial Intelligence	16
7.2	Machine Learning	18
7.3	Training Data	20
7.4	Supervised vs. Unsupervised Learning	23
7.5	Ranked Retrieval Systems	24
7.6	Natural Language Processing	25
8.	Overview of the Relevant Parties and Products	26
8.1	The Parties and Key Third Parties	26
8.1.1	Thomson Reuters and West	26
8.1.2	ROSS Intelligence	27
8.1.3	LegalEase Solutions	28
8.1.4	Morae Global	29
8.2	The Products	30
8.2.1	Westlaw and Westlaw Content	30
8.2.2	Westlaw Search	34

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

8.2.3 The ROSS Platform37

9. ROSS’s Copying of Westlaw Content.....39

9.1 Chronology of Key Events.....39

9.1.1 Use of Artificial Intelligence in Westlaw39

9.1.2 ROSS’s Need for Training Data43

9.1.3 ROSS’s Attempts to Access Westlaw To Acquire Training
Data43

9.1.4 The Creation of the Bulk Memos Using Westlaw50

9.1.5 Termination of LegalEase’s Access to Westlaw61

9.1.6 ROSS’s Awareness of LegalEase’s Conduct.....64

9.1.7 ROSS’s Use of the Bulk Memos as Training Data.....68

9.1.8 The Market for Training Data.....78

10. Conclusion89

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

APPENDICES

Appendix A: *Curriculum Vitae* of Jonathan L. Krein, Ph.D.

Appendix B: List of Materials Considered

Appendix C: Bulk Memos and West Headnotes Chart

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

1. INTRODUCTION

1. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

2. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

3. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

2. SUMMARY OF OPINIONS

4. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

5. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

6. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

7. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

8. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

3. **BACKGROUND AND EXPERT QUALIFICATIONS**

9. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

10.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

11.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

12.

[REDACTED]

[REDACTED]

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

13. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

14. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

15. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

16. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

17. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

¹ See <https://www.uvu.edu/catalog/current/departments/computer-science/computational-data-science-bs/>.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

3.1

[REDACTED]

18.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

19.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

20.

[REDACTED]

[REDACTED]

[REDACTED]

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

21. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

22. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

23. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

24. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

3.2 [REDACTED]

25. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

26.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

27.

[REDACTED]

4. RETENTION AND COMPENSATION

28.

[REDACTED]

29.

[REDACTED]

5. SUMMARY OF MATERIALS AND INFORMATION CONSIDERED

30.

[REDACTED]

31.

[REDACTED]

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

32. [REDACTED]

[REDACTED]

6. LEGAL STANDARDS APPLIED IN THIS EXPERT REPORT

33. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

34. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

² 17 U.S.C. § 102(a).

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

35. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

36. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

³ United States Copyright Office. (March 2021). *Copyright Registration of Computer Programs*. Circular 61. <https://www.copyright.gov/circs/circ61.pdf>, p. 1.

⁴ <https://www.copyright.gov/reports/appendix.pdf>.

⁵ *Dun & Bradstreet Software Servs., Inc. v. Grace Consulting, Inc.*, 307 F.3d 197 (3d Cir. 2002).

⁶ *Feist Publ'ns, Inc. v. Rural Tel. Serv. Co., Inc.*, 499 U.S. 340, 345 (1991).

⁷ *Tanksley v. Daniels*, 902 F.3d. 165, 173 (3d Cir. 2018).

⁸ *Leonard v. Stemtech Int'l Inc.*, 834 F.3d 376, 388 (3d Cir. 2016); *see also Metro Goldwyn-Mayer Studios, Inc. v. Grokster, Ltd*, 545 U.S. 913, 914 (2005) (“One infringes contributorily by intentionally inducing or encouraging direct infringement, and infringes vicariously by profiting from direct infringement while declining to exercise a right to stop or limit it.”) (internal citations omitted).

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

37. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

⁹ *Leonard v. Stemtech Int'l Inc.*, 834 F.3d 376, 388 (3d Cir. 2016).

¹⁰ *Arista Recs., LLC v. Doe 3*, 604 F.3d 110, 118 (2d Cir. 2010) (stating that the knowledge standard for contributory liability “is an objective one; contributory infringement liability is imposed on persons who ‘know or have reason to know’ of the direct infringement”; also noting that willful blindness to infringement is sufficient); *see also In re: Aimster Copyright Litigation*, 334 F.3d 643, 650 (7th Cir. 2003) (“[w]illful blindness is knowledge”); *Glob.-Tech Appliances, Inc. v. SEB S.A.*, 563 U.S. 754, 769 (2011) (stating willful blindness requires that “(1) The defendant must subjectively believe that there is a high probability that a fact exists and (2) the defendant must take deliberate actions to avoid learning of that fact.”)

¹¹ 17 U.S.C. § 107; *see also Harper & Row Publishers, Inc. v. Nation Enters.*, 471 U.S. 539, 545 (1985).

¹² *Murphy v. Millennium Radio Grp. LLC*, 650 F.3d 295, 308 (3d Cir. 2011)

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

38. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

7. RELEVANT TECHNOLOGIES

39. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

7.1 [REDACTED]

40. [REDACTED]

[REDACTED]

[REDACTED]

- [REDACTED]
- [REDACTED]

¹³ *Kallok v. Medtronic, Inc.*, 573 N.W.2d 356, 362 (Minn. 1998). It is my understanding that ROSS contends California law applies to the tortious interference claim, which requires a plaintiff to prove “(1) it has a valid and existing contract with a third party; (2) defendants had knowledge of the contract; (3) defendants committed an intentional act designed to induce a breach or disrupt the contractual relationship; (4) actual breach or disruption of the contract relationship occurred; and (5) damages were suffered as a result.” *See Sebastian Int’l, Inc. v. Russolillo*, 162 F. Supp. 2d 1198, 1203 (C.D. Cal. 2001).

¹⁴ Russell, S. J. and Norvig, P. (2010). *Artificial Intelligence: A Modern Approach*, third edition. Pearson Education, p. 2.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

- [REDACTED]
[REDACTED]
- [REDACTED]
[REDACTED]
- [REDACTED]
[REDACTED]
- [REDACTED]
[REDACTED]

41. [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]

42. [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

¹⁵ *Id.*, p. 4.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

7.2 [REDACTED]

43. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

44. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

¹⁶ Russell, S. and Norvig, P. (2021). *Artificial Intelligence: A Modern Approach*, fourth edition. Pearson Education, p. vii.

¹⁷ Garnelo, M. and Shanahan, M. (2019). *Reconciling deep learning with symbolic artificial intelligence: Representing objects and relations*. Current Opinion in Behavioral Sciences, vol. 29, pp. 17-23.

¹⁸ *Id.*, p. 17.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

45.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

46.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

47. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

48. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

7.3 [REDACTED]

49. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

¹⁹ Russell, S. and Norvig, P. (2021). *Artificial Intelligence: A Modern Approach*, fourth edition. Pearson Education, p. 651.

²⁰ *Id.*, p. 2.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

50. [REDACTED]

[REDACTED]

51. [REDACTED]

[REDACTED]

²¹ See, e.g., Brownlee, J. (2022). *Machine Learning Mastery*.
<https://machinelearningmastery.com/>.

²² See, e.g., <https://towardsdatascience.com/train-validation-and-test-sets-72cb40cba9e7>.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

52.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

²³ K-fold cross validation involves shuffling the data, splitting it into k equally sized partitions or subsets (say 10), and then training the model k times, using each subset in turn as a validation set. When a subset is used for validation, it is excluded from the training. After each round of training and validation, the validation accuracy is saved and the model is discarded. Once all k rounds of training and validation are complete, the k accuracy scores can be combined, such as by averaging, to provide a representative estimate of the model's overall accuracy. This approach has been shown to reduce bias in the final estimate, though it cannot fully eliminate that bias. See, e.g., Brownlee, J. (2020). *A Gentle Introduction to k-fold Cross-Validation*. <https://machinelearningmastery.com/k-fold-cross-validation/>.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

7.4 [REDACTED]

53. [REDACTED]

[REDACTED]

[REDACTED]

54. [REDACTED]

[REDACTED]

55. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

56. [REDACTED]

[REDACTED]

²⁴ Russell, S. and Norvig, P. (2021). *Artificial Intelligence: A Modern Approach*, fourth edition. Pearson Education, p. 652.

²⁵ *Ibid.*

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

57.

[REDACTED]

7.5

[REDACTED]

58.

[REDACTED]

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

59.

[REDACTED]

7.6

[REDACTED]

60.

[REDACTED]

61.

[REDACTED]

²⁶ Brownlee, J. (2017). *Deep Learning for Natural Language Processing*. http://ling.snu.ac.kr/class/AI_Agent/deep_learning_for_nlp.pdf, p. 2.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

8. OVERVIEW OF THE RELEVANT PARTIES AND PRODUCTS

8.1 [REDACTED]

8.1.1 [REDACTED]

62. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED] [REDACTED] [REDACTED]
[REDACTED] [REDACTED]
[REDACTED] [REDACTED]
[REDACTED]
[REDACTED]

63. [REDACTED]
[REDACTED] [REDACTED] [REDACTED]

²⁷ Thomson Reuters Corporation 2021 Annual Report, pp. 102, 116, 189.

²⁸ 2022 Strategic Growth Priorities, Thomson Reuters Corporation 2021 Annual Report, p. 6.

²⁹ *Id.*, p. 8.

³⁰ *Id.*

³¹ TR-0359959–TR-0360216 [REDACTED]

[REDACTED] ; *see also* A. Martens Dep. Tr. 202:22–203:4 [REDACTED]
[REDACTED].

³² Thomson Reuters Corporation 2021 Annual Report, p. 189.

³³ *See generally* TR-0033982–TR-0034560 [REDACTED] ; *see also* E. Lindberg Dep. Tr. 18:11–14 [REDACTED]
[REDACTED]

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

8.1.2 [REDACTED]

64. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

³⁴ See A. Martens Dep. Tr. 154:23-155:14

[REDACTED]

201:19-202:7

; see also TR-

0358927-TR-0358948

TR-0358967-TR-0358988

³⁵ A. Arruda Dep. Tr. 59:3-5

[REDACTED]

, 68:1-11

³⁶ “Features,” <https://www.rossintelligence.com/features>.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

8.1.3 [REDACTED]

65. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

³⁷ ROSS's Supplemental Responses and Objections to Plaintiffs' First Set of Interrogatories, February 22, 2022, Supplemental Answer to Interrogatory No. 2, pp. 8–9.

³⁸ TR-0037677-TR-0037680 [REDACTED]

³⁹ ROSS's Supplemental Responses and Objections to Plaintiffs' First Set of Interrogatories, February 22, 2022, Supplemental Answer to Interrogatory No. 2, p. 11.

⁴⁰ T. Whitehead Dep. Tr. 26:16-27:10 [REDACTED]

[REDACTED]

⁴¹ See A. Martens Dep. Tr. 229:25–230:2 [REDACTED]

[REDACTED]; see also ROSS-003389728-ROSS-003389730

[REDACTED]; TR-0002812-TR-0002814

⁴² TR-0002779-TR-0002781 [REDACTED]

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

8.1.4

66.

43 TR-0002812-TR-0002814

⁴⁴ C. Cahn Dep. Tr. 16:15–24

45 TR-0039933-TR-0039942

⁴⁶ T. Hafeez Dep. Tr. 237:10–16

⁴⁷ R-LEGALEASE-00048772-R-LEGALEASE-00048776 at ‘772.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

8.2

8.2.1

67.

68.

⁴⁸ C. Cahn Dep. Tr. 72:25–73:7

⁴⁹ See, e.g., TR-0179838-TR-0179842 [REDACTED]
[REDACTED]; TR-0179830- TR-0179837
[REDACTED]; TR-0432528-TR-0432533

⁵⁰ See generally L. Oliver Dep. Tr., pp. 26-27, 31-34.

⁵¹ L. Oliver Dep. Tr. 51:17–52:8

⁵² L. Oliver Dep. Tr. 26:19–27:4

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

69. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

70. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

71. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

⁵³ L. Oliver Dep. Tr. 27:16-24 [REDACTED]

[REDACTED] , 30:7-13 [REDACTED]

⁵⁴ A. Martens Dep. Tr. 142:7-20 [REDACTED]

[REDACTED]

⁵⁵ See generally TR-0002864-TR-0003137 [REDACTED]

[REDACTED]

⁵⁶ L. Oliver Dep. Tr. 227:16-228:23 [REDACTED]

[REDACTED]

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

72. [REDACTED]

[REDACTED]

73. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

⁵⁷ See, e.g., TR-0179838-TR-0179842 [REDACTED]
[REDACTED]; TR-0179830- TR-0179837
[REDACTED]; TR-0432528-TR-0432533 [REDACTED]; TR-0002864-
TR-0003137 [REDACTED]; Plaintiffs' Second
Supplemental Response to ROSS's Interrogatory No. 1, March 23, 2022, p. 9.

⁵⁸ *Id.*; L. Oliver Dep. Tr., pp. 198-211, 340-341.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

74.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

⁵⁹ L. Oliver Dep. Tr., pp. 198-211, 340-341.

⁶⁰ Plaintiffs' Second Supplemental Response to ROSS's Interrogatory No. 1, March 23, 2022, pp. 8-9.

⁶¹ See A. Martens Dep. Tr. 274:4-13

[REDACTED]
[REDACTED]; see also TR-0033982-TR-0034560 [REDACTED]; TR-0003138-TR-0033981 [REDACTED].

⁶² See TR-0034557-TR-0034560; see also A. Martens Dep. Tr. 162:4-17

[REDACTED]

[REDACTED]

[REDACTED]

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

8.2.2 [REDACTED]

75. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

76. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

⁶³ See generally TR-0033982–TR-0034560 [REDACTED].

⁶⁴ TR-0037669-TR-0037676 [REDACTED].

⁶⁵ K. Al-Kofahi Dep. Tr. 11:13-17:5.

⁶⁶ I. Moulinier Dep. Tr. 72:13-87:18; see also WestSearch Plus, <https://legal.thomsonreuters.com/en/products/Westlaw-edge/westsearch-plus>.

⁶⁷ I. Moulinier Dep. Tr. 72:13-74:10.

⁶⁸ I. Moulinier Dep. Tr. 74:11-13.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

77.

[REDACTED]

78.

[REDACTED]

⁶⁹ I. Moulinier Dep. Tr. 73:18-74:10.

⁷⁰ K. Al-Kofahi Dep. Tr. 20:3-21:20.

⁷¹ “WestSearch Plus,” <https://legal.thomsonreuters.com/en/products/Westlaw-edge/westsearch-plus>.

⁷² K. Al-Kofahi Dep. Tr. 43:15–48:5.

⁷³ “WestSearch Plus,” <https://legal.thomsonreuters.com/en/products/Westlaw-edge/westsearch-plus>.

⁷⁴ *Id.*

⁷⁵ *Id.*

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

79. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

⁷⁶ K. Al-Kofahi Dep. Tr. 41:12–15 [REDACTED]
[REDACTED].

⁷⁷ I. Moulinier Dep. Tr. 108:19–24 [REDACTED]
[REDACTED].

⁷⁸ I. Moulinier Dep. Tr. 104:18–20 [REDACTED]
[REDACTED].

⁷⁹ I. Moulinier Dep. Tr. 78:2–4; *see also* TR-0884952–TR-0884970 [REDACTED]
[REDACTED].

⁸⁰ TR-0884952–TR-0884970 at TR-0884962 [REDACTED]
[REDACTED].

⁸¹ K. Al-Kofahi Dep. Tr. 44:3–15 [REDACTED]
[REDACTED].

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

80.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

8.2.3

[REDACTED]

81.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

⁸² I. Moulinier Dep. Tr. 126:11–21

[REDACTED]

⁸³ I. Moulinier Dep. Tr. 143:6–11

[REDACTED].

⁸⁴ *See generally* A. Arruda Dep. Tr., pp. 58-60.

⁸⁵ “How is Natural Language Search Changing The Face of Legal Research?,” <https://blog.rossintelligence.com/post/how-natural-language-search-changing-face-of-legal-research>.

⁸⁶ A. Arruda Dep. Tr. 114:10–20

[REDACTED]

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

82.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

⁸⁷ A. Arruda Dep. Tr. 114:25–115:11

[REDACTED]

⁸⁸ ROSS's Supplemental Responses and Objections to Plaintiffs' First Set of Interrogatories, February 22, 2022, Supplemental Answer to Interrogatory No. 2, p. 12.

⁸⁹ *Id.*

⁹⁰ ROSS-003334354

[REDACTED]; ROSS's Supplemental Responses and Objections to Plaintiffs' First Set of Interrogatories, February 22, 2022, Supplemental Answer to Interrogatory No. 2, p. 12.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

83. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

9. [REDACTED]

84. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

9.1 [REDACTED]

9.1.1 [REDACTED]

85. [REDACTED]

[REDACTED]

[REDACTED]

⁹¹ ROSS's Supplemental Responses and Objections to Plaintiffs' First Set of Interrogatories, February 22, 2022, Supplemental Answer to Interrogatory No. 2, pp. 12-13.

⁹² *Id.*, p. 13.

⁹³ TR-0037669-TR-0037676 [REDACTED]
[REDACTED].

⁹⁴ *Id.* [REDACTED]
[REDACTED]

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

86.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

87.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

⁹⁵ K. Al-Kofahi Dep. Tr. 19:2–17

[REDACTED]

⁹⁶ I. Moulinier Dep. Tr. 14:10–22

[REDACTED]

⁹⁷ I. Moulinier Dep. Tr. 14:25–15:5

[REDACTED]

⁹⁸ I. Moulinier Dep. Tr. 108:10–15

[REDACTED]

⁹⁹ I. Moulinier Dep. Tr. 16:5–15

[REDACTED]

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

¹⁰⁰ I. Moulinier Dep. Tr. 143:2–5 [REDACTED]

¹⁰¹ K. Al-Kofahi Dep. Tr. 44:3–46:22 [REDACTED]

[REDACTED]

[REDACTED]; I. Moulinier Dep. Tr. 106:11–14; 108:19–24

[REDACTED]

¹⁰² K. Al-Kofahi Dep. Tr. 44:3–45:15 [REDACTED]

[REDACTED]

¹⁰³ K. Al-Kofahi Dep. Tr. 44:17–46:22 [REDACTED]

[REDACTED]

see also I. Moulinier Dep. Tr. 104:12–20

[REDACTED]

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

88.

[REDACTED]

¹⁰⁴ I. Moulinier Dep. Tr. 61:14–64:5

[REDACTED]

¹⁰⁵ I. Moulinier Dep. Tr. 61:4–64:5

[REDACTED]

¹⁰⁶ I. Moulinier Dep. Tr. 108:25–109:5

[REDACTED]

¹⁰⁷ I. Moulinier Dep. Tr. 143:6–11

[REDACTED]

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

9.1.2 [REDACTED]

89. [REDACTED]

[REDACTED]

[REDACTED]

90. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

9.1.3 [REDACTED]

91. [REDACTED]

[REDACTED]

¹⁰⁸ A. Arruda Dep. Tr. 57:20–58:6 [REDACTED]
[REDACTED]
[REDACTED].

¹⁰⁹ ROSS's Supplemental Responses and Objections to Plaintiffs' First Set of Interrogatories, February 22, 2022, Supplemental Answer to Interrogatory No. 2, p. 12 [REDACTED]
[REDACTED].

¹¹⁰ A. Arruda Dep. Tr. 275:23–276:12 [REDACTED]
[REDACTED]
[REDACTED].

¹¹¹ J. Ovbiagele Dep. Tr. 204:3–7 [REDACTED]
[REDACTED]
[REDACTED]; *see also* [REDACTED]
[REDACTED], ROSS-003390881-ROSS-003390884 [REDACTED]
[REDACTED]; T. van der Heijden Dep. Tr. 87:14-89:5 [REDACTED]
[REDACTED].

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

92. [REDACTED]

[REDACTED]

[REDACTED]

93. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

94. [REDACTED]

[REDACTED]

[REDACTED]

¹¹² ROSS-003391075 [REDACTED]

[REDACTED].

¹¹³ ROSS-003391076 [REDACTED].

¹¹⁴ ROSS-023032254 [REDACTED]

[REDACTED].

¹¹⁵ ROSS-003390773-ROSS-003390774 [REDACTED]

[REDACTED].

¹¹⁶ ROSS-003390233 [REDACTED].

¹¹⁷ *Id.*

¹¹⁸ ROSS-003390772 [REDACTED]

[REDACTED].

¹¹⁹ ROSS-003390563-ROSS-003390565 [REDACTED]

[REDACTED]; ROSS's Supplemental Responses and Objections to Plaintiffs'

95.

96.

First Set of Interrogatories, February 22, 2022, Supplemental Answer to Interrogatory No. 2, p. 11.

¹²³ T. van der Heijden Dep. Tr. 148:10–149:10

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

97.

[REDACTED]

98.

[REDACTED]

[REDACTED] TR-0001154-TR-0001165
[REDACTED]
[REDACTED] ROSS-010361787-ROSS-
010361789
[REDACTED] ; *see also* T. van der Heijden Dep. Tr. 174:10
[REDACTED]

¹²⁴ ROSS-003610162-ROSS-003610165 [REDACTED]
[REDACTED]

¹²⁵ *Id.*

¹²⁶ ROSS-010164290-ROSS-010164291 [REDACTED]
[REDACTED]

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

99. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

¹²⁷ *Id.*

¹²⁸ [REDACTED]

¹²⁹ TR-0038909-TR-0038920 [REDACTED]

¹³⁰ LEGALEASE-00056843-LEGALEASE-00056844 [REDACTED]

¹³¹ T. Hamilton Dep. Tr. 125:4–9 [REDACTED]

¹³² T. Hafeez Dep. Tr., p. 188:4–7 [REDACTED]

¹³³ LEGALEASE-00056843-LEGALEASE-00056844 [REDACTED]

¹³⁴ *Id.*

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

100. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

101. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

¹³⁵ *Id.*

¹³⁶ T. Hafeez Dep. Tr., 188:25–189:3 [REDACTED]

¹³⁷ J. Ovbiagele Dep. Tr. 236:9–237:2 [REDACTED]

[REDACTED]

¹³⁸ ROSS-000304769-ROSS-000304784 [REDACTED]

[REDACTED] at ROSS-000304771-ROSS-000304774.

¹³⁹ *See generally* T. Hafeez Dep. Tr., pp. 78-79; *see also* R-LEGALEASE-00050718-R-LEGALEASE-00050721 [REDACTED]

[REDACTED]

¹⁴⁰ TR-0039933-TR-0039942 [REDACTED]

[REDACTED]

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

102. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

¹⁴¹ R-LEGALEASE-00048772-R-LEGALEASE-00048776 [REDACTED]
[REDACTED].

¹⁴² T. Hafeez Dep. Tr., 88:19–89:20, 94:6–8 [REDACTED]
[REDACTED], TR-0039933-TR-0039942.

¹⁴³ R-LEGALEASE-00048772-R-LEGALEASE-00048776 [REDACTED]
[REDACTED]; C. Cahn Dep. Tr. 72:25–73:7 [REDACTED]
[REDACTED].

¹⁴⁴ ROSS-000304769-ROSS-000304784 [REDACTED]
[REDACTED] at ROSS-000304771-ROSS-000304774.

¹⁴⁵ Per ROSS's direction, LegalEase was to [REDACTED]
[REDACTED] *See* ROSS-000175054 – ROSS-000175067 [REDACTED]
[REDACTED]. LegalEase also stated that [REDACTED] *See*
LEGALEASE-00171828-LEGALEASE-00171831 (emphasis added). LegalEase further stated
that it [REDACTED]

[REDACTED] *Id.*

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

9.1.4

[REDACTED]

103.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

104.

[REDACTED]

[REDACTED]

105.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

106.

[REDACTED]

[REDACTED]

¹⁴⁶ ROSS-000175054-ROSS-000175067 [REDACTED].

¹⁴⁷ *Id.*; see also ROSS-003419784-ROSS-003419786 [REDACTED].

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

107.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

¹⁴⁸ *See e.g.*, TR-0048632

¹⁴⁹

See, e.g., LEGALEASE-00093066-LEGALEASE-00093074
; T. Hafeez Dep. Tr. 66:4–17

¹⁵⁰ LEGALEASE-00093066-LEGALEASE-00093074

¹⁵¹ R-LEGALEASE-00189134-R-LEGALEASE-00189139

¹⁵² *Id.*

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

¹⁵³ *Id.*

¹⁵⁴ *Id.*

156 LEGALEASE-00078065-LEGALEASE-00078083

, 194:19–195:5

152:7-21

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

109. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

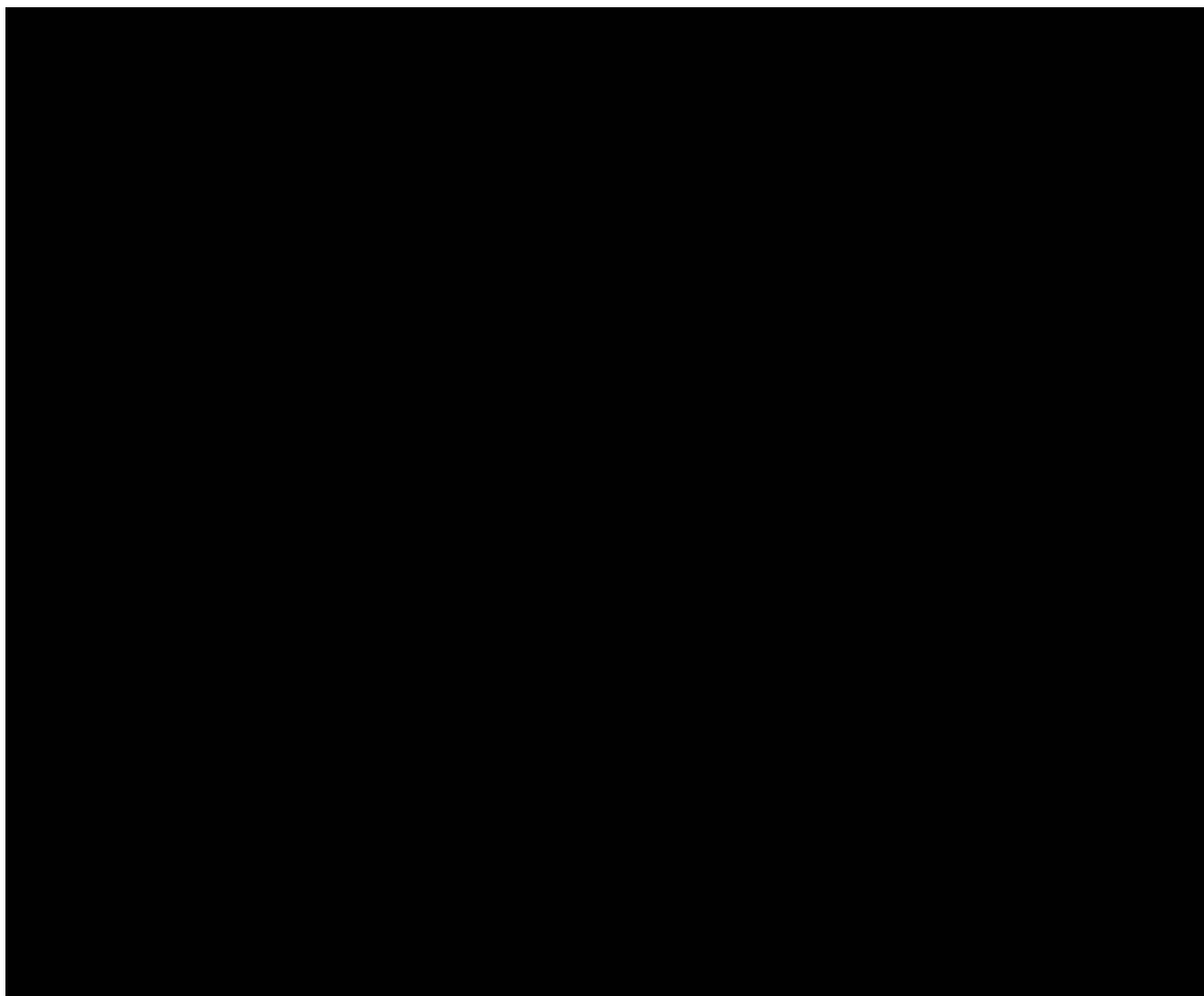
[REDACTED]

¹⁵⁷ *See, e.g.*, MORAE 00024103 [REDACTED], MORAE 00002386 [REDACTED]

[REDACTED] MORAE 00003801 [REDACTED],
MORAE_00013863 [REDACTED], MORAE_00029239 [REDACTED],
MORAE_00045427 [REDACTED], MORAE_00092628 [REDACTED],
MORAE_00092629 [REDACTED], MORAE_00005079 [REDACTED],
MORAE_00043660 [REDACTED], MORAE_00015344 [REDACTED],
MORAE_00014068 [REDACTED], MORAE 00030512 [REDACTED],
LEGALEASE-00115007 [REDACTED].

¹⁵⁸ MORAE_00045427 [REDACTED].

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY



110.

[REDACTED]

[REDACTED]

[REDACTED]

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

111. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

¹⁵⁹ MORAE_00011129 [REDACTED].

¹⁶⁰ MORAE_00045427 [REDACTED].

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

112. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

¹⁶¹ TR-0073545-TR-0073546 [REDACTED]

[REDACTED].

¹⁶² [REDACTED]

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

113.

[REDACTED]

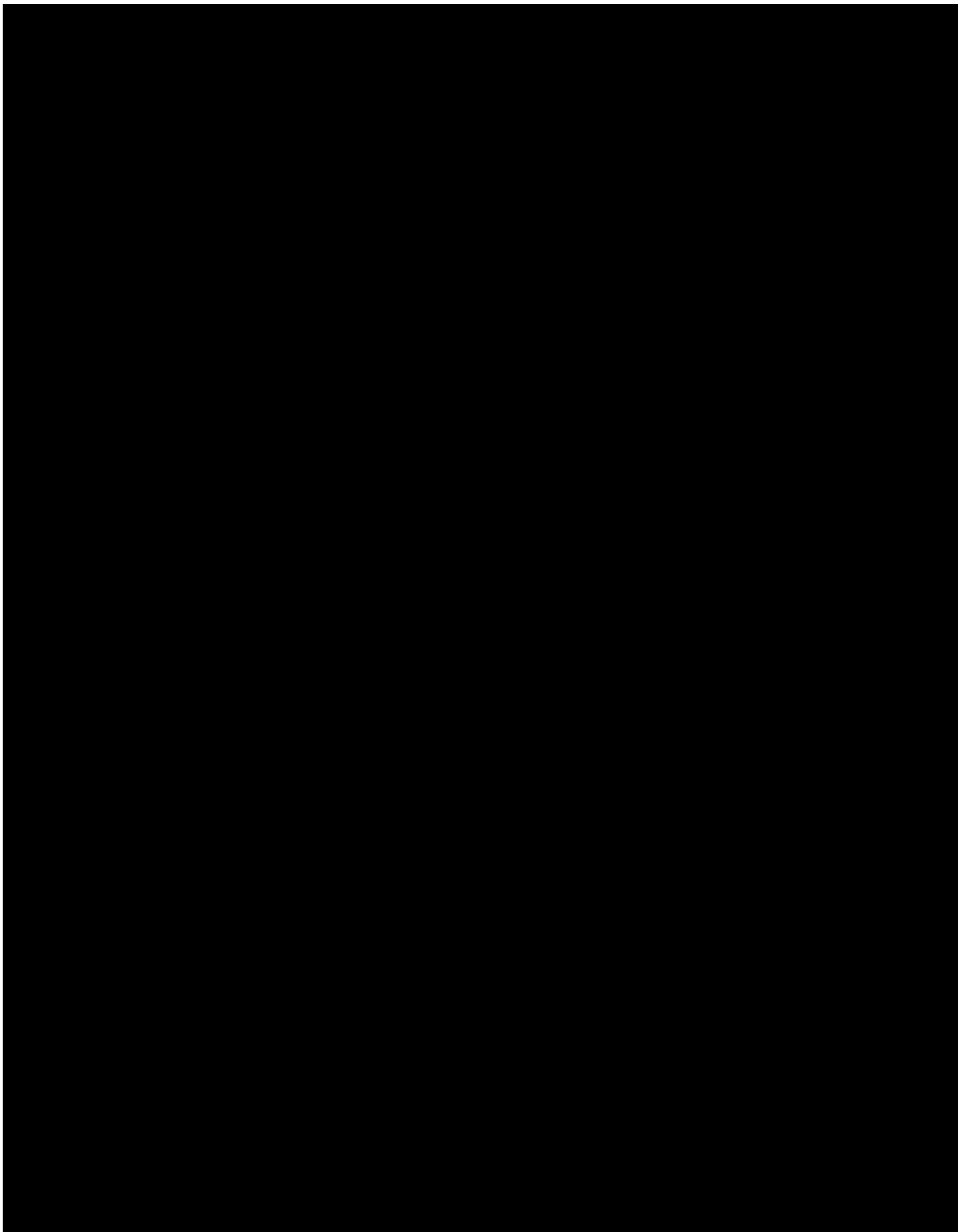
[REDACTED]

¹⁶³ Compare TR-0179847-TR-0179854 [REDACTED], with, ROSS-010128683 [REDACTED].

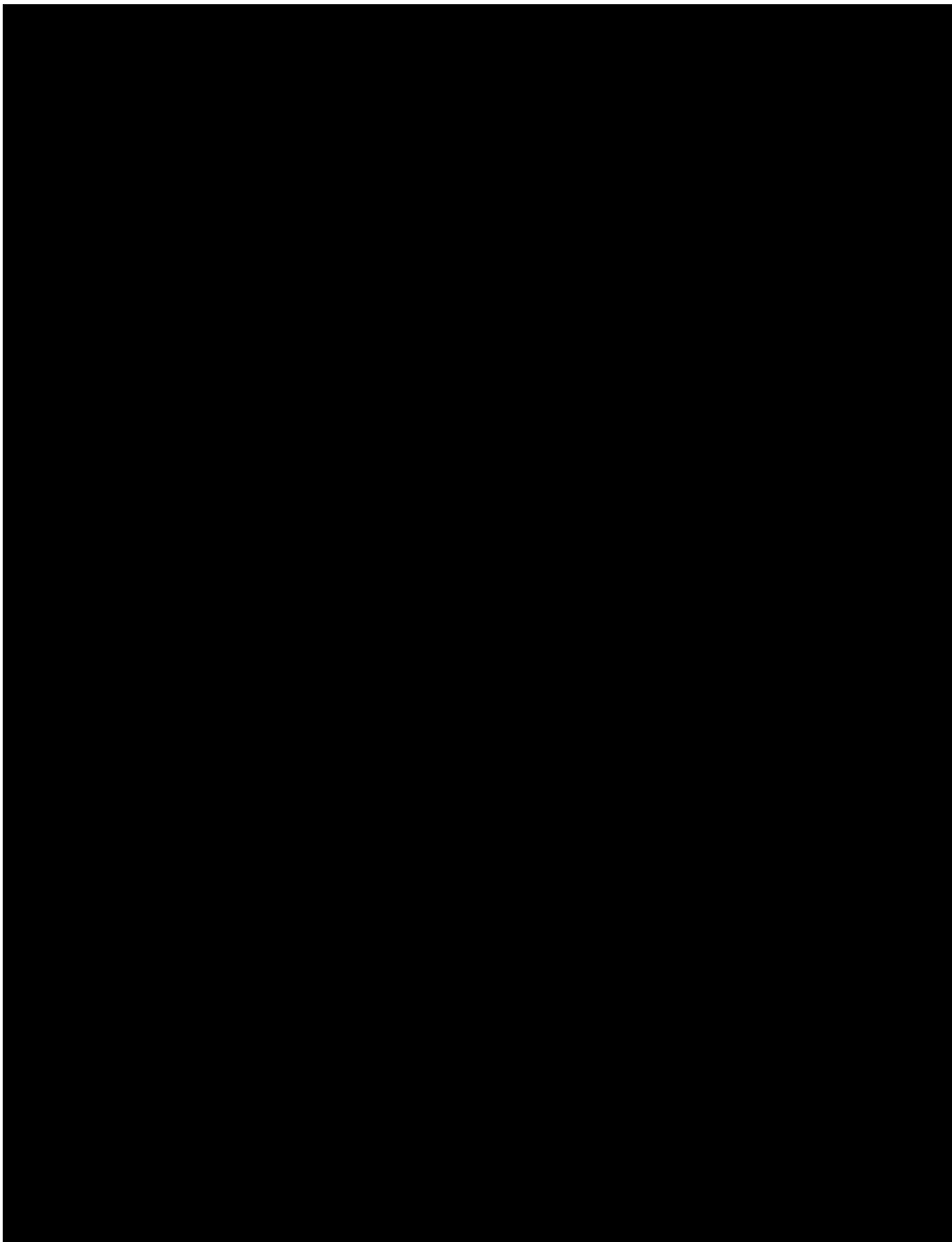
¹⁶⁴ [REDACTED].

¹⁶⁵ [REDACTED] (see, e.g., ROSS-003280407-ROSS-003280408 [REDACTED] (see, e.g., ROSS-003284576-ROSS-003284577 [REDACTED] : (see, e.g., ROSS-003280067-ROSS-003280068 [REDACTED] : (see, e.g., ROSS-003280375-ROSS-003280376 [REDACTED].

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY



HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY



HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

114.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

9.1.5

[REDACTED]

115.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

116.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

¹⁶⁶ T. Hafeez Dep. Tr., pp. 39:19–25

[REDACTED]

[REDACTED]

¹⁶⁷ R-LEGALEASE-00140998

[REDACTED]

[REDACTED]

¹⁶⁸ *Id*; see also R-LEGALEASE-00101636-R-LEGALEASE-00101642

[REDACTED]

[REDACTED]

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

117. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

118. [REDACTED]

[REDACTED]

[REDACTED]

¹⁶⁹ TR-0836004 [REDACTED].

¹⁷⁰ *Id.*

¹⁷¹ *Id.*

¹⁷² *See, e.g.*, TR-0002827-TR-0002830 [REDACTED]

¹⁷³ *Id.*

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

119. [REDACTED]

[REDACTED]

¹⁷⁴ *Id.*

¹⁷⁵ *Id.*

¹⁷⁶ TR-0035897-TR-0035908

[REDACTED]

; *see also* T. Hafeez Dep. Tr. 98:24-99:17

¹⁷⁷ T. Hafeez Dep. Tr. 41:22-42:7, 114:17-115:7.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

120.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

9.1.6

[REDACTED]

121.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

¹⁷⁸ J. Ovbiagele Dep. Tr. 67:6–9

[REDACTED], 67:12–14.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

122.

[REDACTED]

123.

[REDACTED]

124.

[REDACTED]

125.

[REDACTED]

¹⁷⁹ See Section 9.1.3, *supra*.

¹⁸⁰ *Id.*

¹⁸¹ ROSS-000204366-ROSS-000204367 [REDACTED]

¹⁸² LEGALEASE-00171828-LEGALEASE-00171831 [REDACTED]

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

126. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

¹⁸³ See generally T. van der Heijden Dep. Tr., pp. 293-296.

¹⁸⁴ J. Obviagele Dep. Tr. 73:21-77:5 [REDACTED].

¹⁸⁵ ROSS-000204366-ROSS-000204367 [REDACTED]; see also T. van der Heijden Dep. Tr. 342:4-7 [REDACTED].

¹⁸⁶ ROSS-000177723 [REDACTED]; see also T. van der Heijden Dep. Tr. 347:20-22 [REDACTED].

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

127. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

¹⁸⁷ ROSS-003297293-ROSS-003297295 [REDACTED]; *see also* ROSS-000136374-ROSS-000136379; *see also* T. van der Heijden Dep. Tr. 335:15–19 [REDACTED]

¹⁸⁸ ROSS-009637509 [REDACTED]

¹⁸⁹ *Id.*

¹⁹⁰ ROSS-009637399-ROSS-009637400 [REDACTED]

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

128. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

9.1.7 [REDACTED]

129. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

130. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

¹⁹¹ *Id.*

¹⁹² *See, e.g.*, ROSS-000054844 [REDACTED]
[REDACTED]

¹⁹³ [REDACTED].

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

131. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

132. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

194 [REDACTED]

[REDACTED]

¹⁹⁵ <http://mongodb.github.io/node-mongodb-native/schema/chapter3/>.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

133.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

134.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

¹⁹⁶ *See, e.g.,* [REDACTED]

¹⁹⁷ [REDACTED]

[REDACTED]

[REDACTED]

¹⁹⁸ [REDACTED]

[REDACTED]

[REDACTED]

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

135.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

136. [REDACTED]

[REDACTED]

[REDACTED]

137. [REDACTED]

[REDACTED]

[REDACTED]

138. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

¹⁹⁹ At some point during the history of the pipeline, [REDACTED]

[REDACTED]

²⁰⁰ [REDACTED]

[REDACTED]

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

139.

[REDACTED]

140.

[REDACTED]

141.

[REDACTED]

142.

[REDACTED]

²⁰¹ See, e.g., Brownlee, J. (2022). *Machine Learning Mastery*. <https://machinelearningmastery.com/>.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

- [REDACTED]
[REDACTED]
- [REDACTED]
[REDACTED]
- [REDACTED]
- [REDACTED]

[REDACTED]

[REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED]

-
- [REDACTED]
 - [REDACTED]
 - [REDACTED]
 - [REDACTED]
 - [REDACTED]
 - [REDACTED]
 - [REDACTED]
 - [REDACTED]
 - [REDACTED]
 - [REDACTED]

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

143.

[REDACTED]

144.

[REDACTED]

211

[REDACTED]

212

[REDACTED]

213 ROSS-003419784-ROSS-003419786

[REDACTED]

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

145. [REDACTED]

[REDACTED]

[REDACTED]

146. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

147. [REDACTED]

[REDACTED]

[REDACTED]

²¹⁴ ROSS's Supplemental Responses and Objections to Plaintiffs' First Set of Interrogatories, February 22, 2022, Supplemental Answer to Interrogatory No. 2, p. 12.

²¹⁵ ROSS-003658597-ROSS-003658604 [REDACTED]
[REDACTED]

²¹⁶ *Id.*

²¹⁷ ROSS-003419784-ROSS-003419786 [REDACTED]
[REDACTED]

²¹⁸ *See* Section 7.3, *supra*.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

148. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

149. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

²¹⁹ ROSS-009558441-ROSS-009558443; ROSS-003487472-ROSS-003487474; ROSS-009545896-ROSS-009545899.

²²⁰ ROSS-003487472-ROSS-003487474 [REDACTED]

[REDACTED]

; ROSS-009558441-ROSS-009558443

; ROSS-009545896-ROSS-009545899

ROSS-003704423-ROSS-003704439

[REDACTED]

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

9.1.8 [REDACTED]

150. [REDACTED]

[REDACTED]

151. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

152. [REDACTED]

[REDACTED]

[REDACTED]

²²¹ <https://ai.googleblog.com/2016/09/introducing-open-images-dataset.html>

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

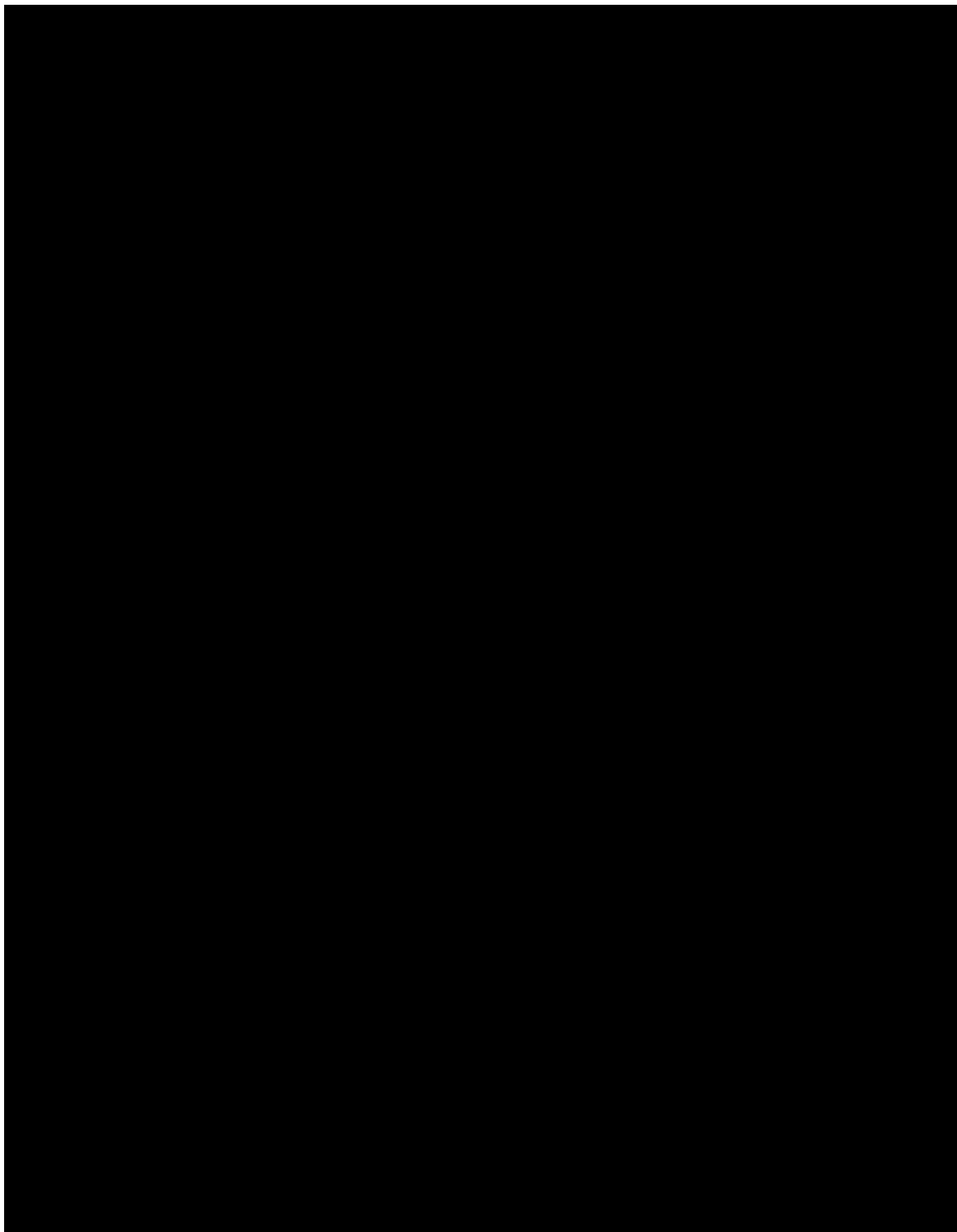
153.

[REDACTED]

[REDACTED]

²²² <http://press.gettyimages.com/getty-images-launches-industry-first-model-release-supporting-data-privacy-in-artificial-intelligence-and-machine-learning/>

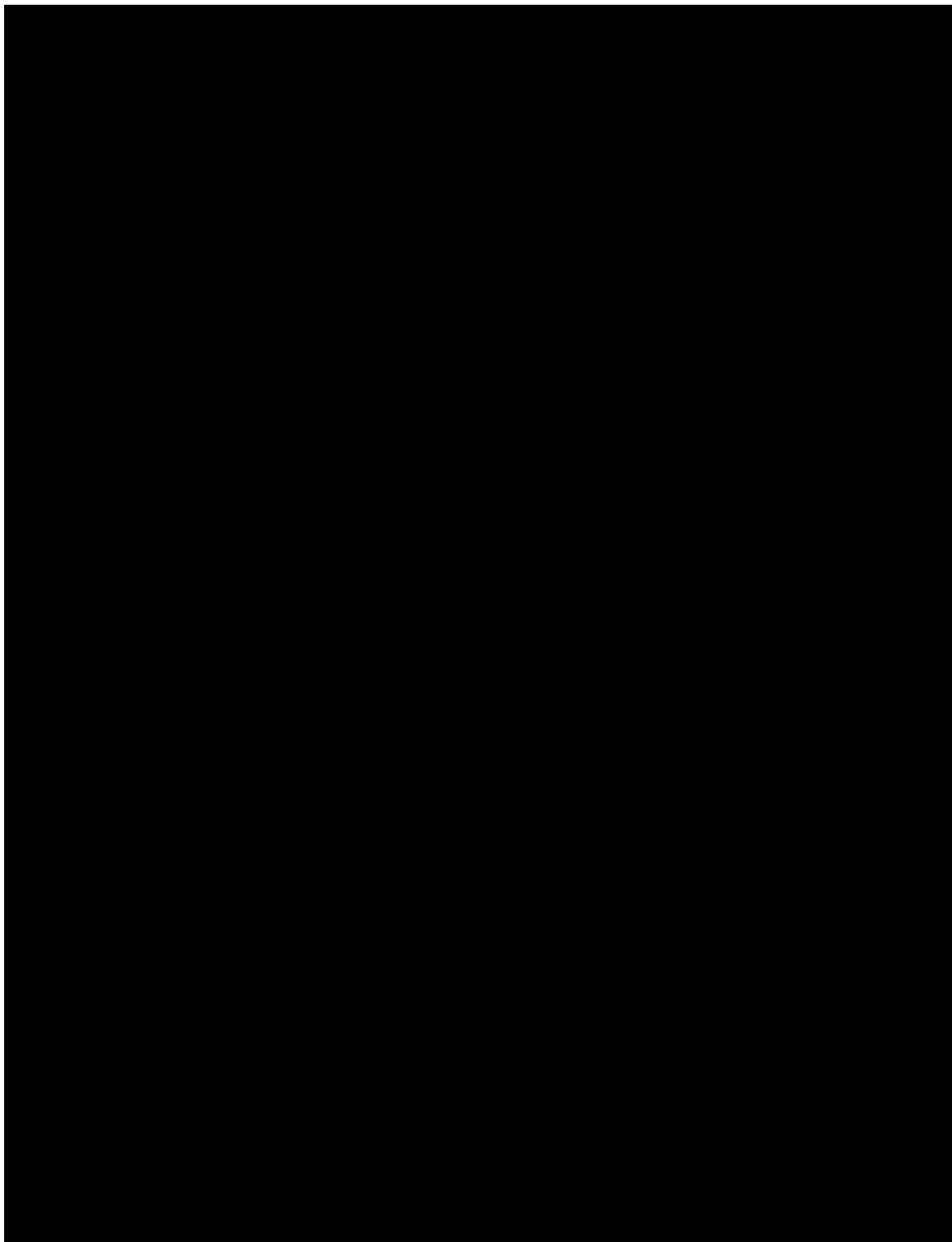
HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY



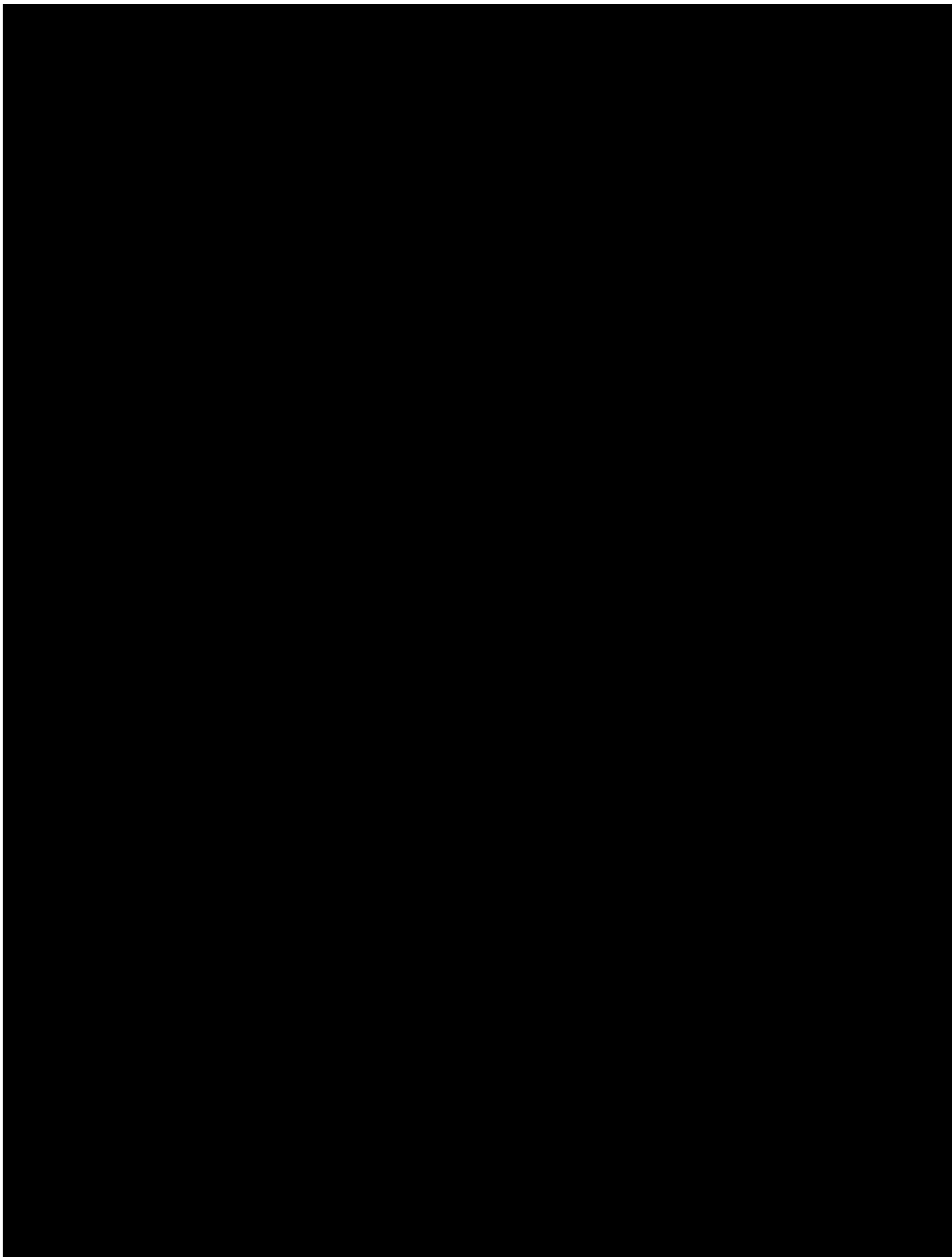
HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY



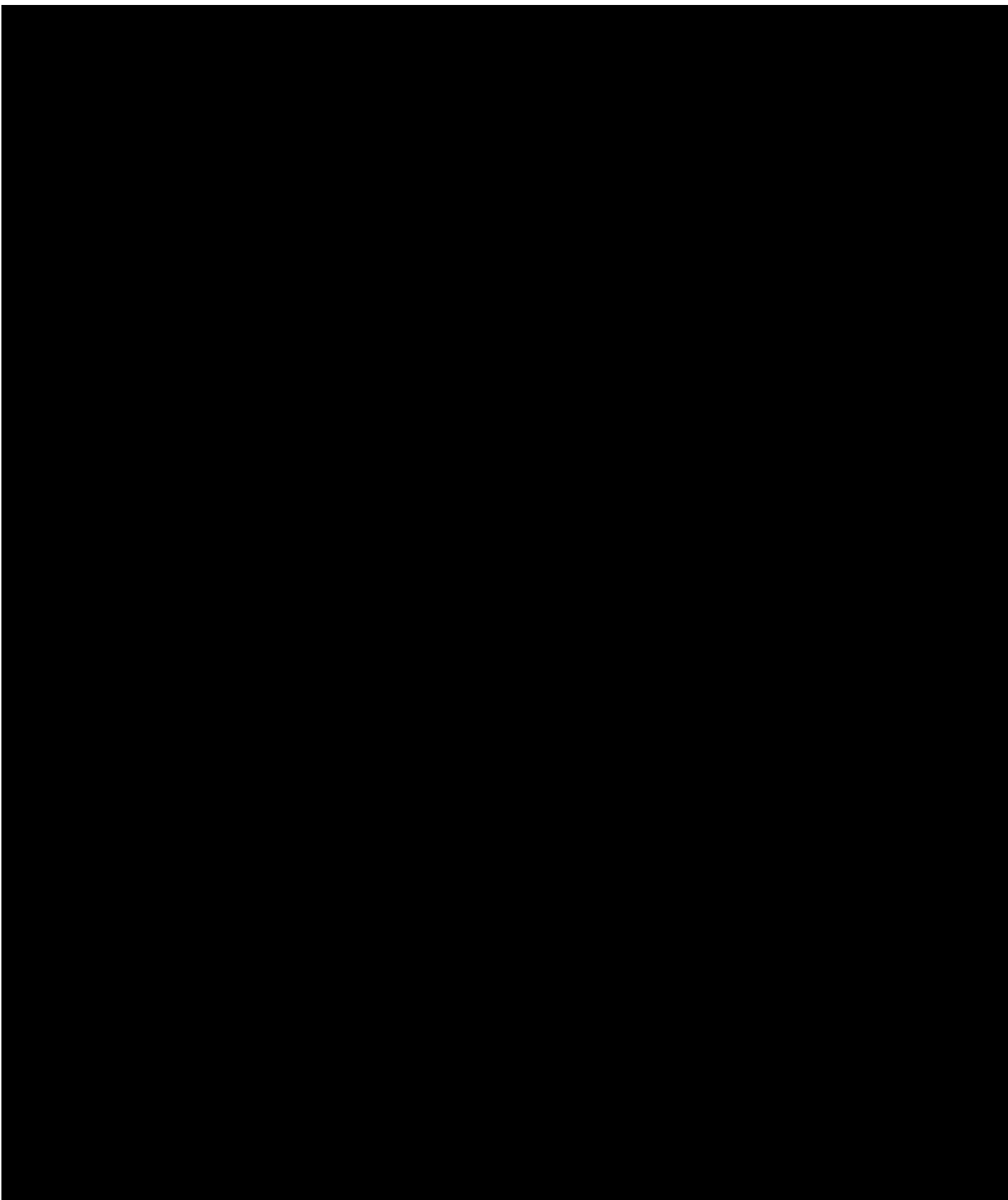
HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY



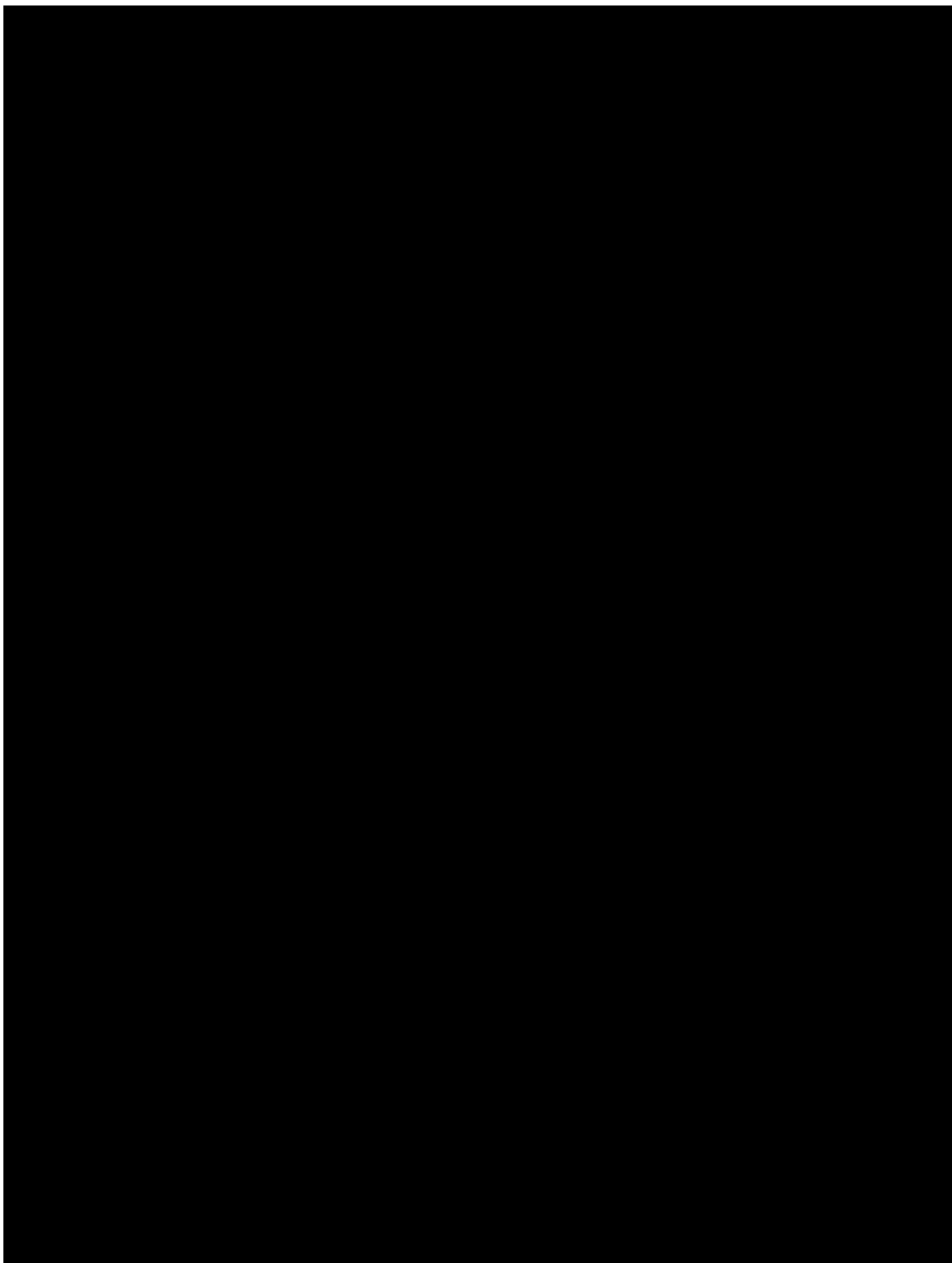
HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY



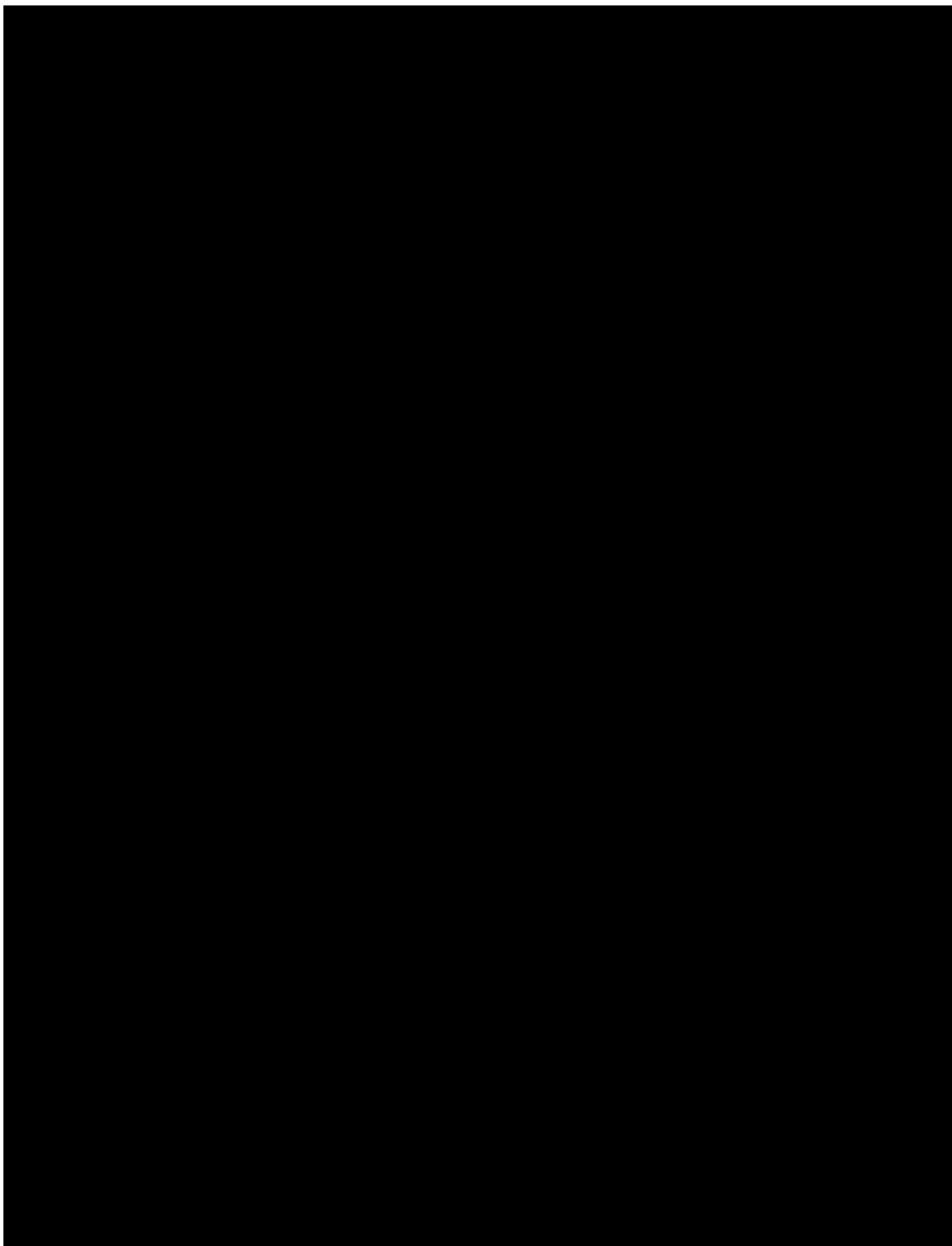
HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY



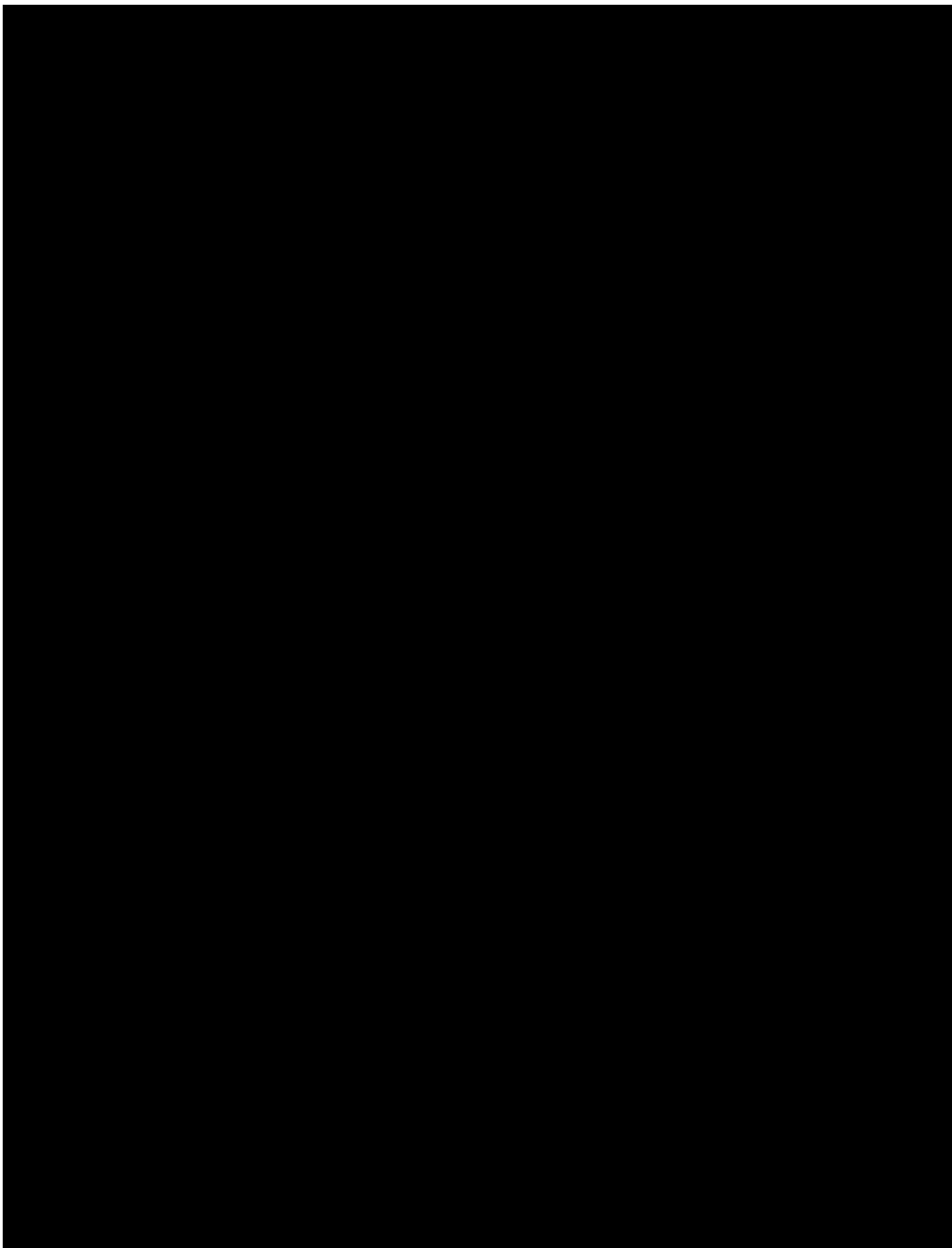
HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY



HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY



HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY



HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

154. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

155. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

²²³ J. Obviagele Dep. Tr. 171:7–11 [REDACTED]
[REDACTED]

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

156.

10.

157.

²²⁴ ROSS-003487472-ROSS-003487474; *see also* ROSS-009558441-ROSS-009558443

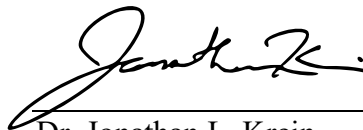
; ROSS-009545896-ROSS-009545899

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Jonathan L. Krein". The signature is written in a cursive, flowing style. It is positioned above a horizontal line that spans the width of the signature.

Dr. Jonathan L. Krein

EXHIBIT AS

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

THOMSON REUTERS ENTERPRISE)	
CENTRE GMBH and WEST PUBLISHING)	
CORPORATION,)	
)	
Plaintiffs and	)	C.A. No. 20-613-SB
Counterdefendants,)	
)	
v.)	
)	
ROSS INTELLIGENCE INC.,)	
)	
Defendant and)	
Counterclaimant.)	

REBUTTAL EXPERT REPORT OF DR. JONATHAN L. KREIN
HIGHLY CONFIDENTIAL - ATTORNEYS EYES ONLY

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

TABLE OF CONTENTS

1.	Introduction.....	1
2.	Background and Expert Qualifications	1
3.	Summary of Opinions	3
4.	The Branting Report	6
4.1	Dr. Branting’s Analysis of ROSS’s Training Data is Methodologically Unsound and Inconsistent With the Record.....	9
4.2	[REDACTED]	12
4.3	[REDACTED]	13
4.4	[REDACTED]	17
4.5	Additional Matters	21
5.	The Frederiksen-Cross Report	23
5.1	Flaws in the Materials Considered and Methodologies Used by Ms. Frederiksen-Cross	28
5.1.1	Materials Considered by Ms. Frederiksen-Cross	29
5.2	Ms. Frederiksen-Cross’s Flawed Analysis of Judicial Opinions, West Headnotes, and Bulk Memo Questions.....	33
5.2.1	Comparison of West Headnotes to Judicial Opinions	33
5.2.2	Ranking Similarity Between Bulk Memo Questions and West Headnotes, and West Headnotes and Judicial Opinions.....	38
5.3	Ms. Frederiksen-Cross’s Findings Are Biased and Not Relevant	41
6.	Conclusion	53

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

APPENDICES

Appendix A:	List of Materials Considered
Appendix B:	Chart of Mismatched West Headnotes From Exhibit H to the Frederiksen-Cross Report
Appendix C:	Chart of West Headnotes Copied By ROSS Identified in Exhibit P to the Frederiksen-Cross Report
Appendix D:	Word vs. Ngram Graphs
Appendix E:	Chart Summarizing Similarity From Three-Way Comparison on LexisNexis Headnotes, West Headnotes, and Bulk Memo Questions

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

1. [REDACTED]

1. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

2. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

2. [REDACTED]

3. [REDACTED]

[REDACTED]

[REDACTED]

¹ Expert Report of Dr. Jonathan L. Krein, August 1, 2022.

² Expert Report of L. Karl Branting, J.D., Ph.D., August 1, 2022.

³ Expert Report of Barbara Frederiksen-Cross, August 1, 2022.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

4.

[REDACTED]

5.

[REDACTED]

6.

[REDACTED]

7.

[REDACTED]

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

8.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

9.

[REDACTED]

[REDACTED]

[REDACTED]

10.

[REDACTED]

[REDACTED]

[REDACTED]

3.

[REDACTED]

11.

[REDACTED]

[REDACTED]

[REDACTED]

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

12.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

13.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

14.

[REDACTED]

[REDACTED]

15.

[REDACTED]

[REDACTED]

[REDACTED]

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

16. [REDACTED]

[REDACTED]

[REDACTED]

17. [REDACTED]

[REDACTED]

[REDACTED]

18. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

19. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

20. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

21. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

4. [REDACTED]

22. [REDACTED]

[REDACTED]

23. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

⁴ Expert Report of L. Karl Branting, J.D., Ph.D., August 1, 2022, ¶ 13–22

⁵ *Id.*, ¶ 15.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

24. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

25. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

⁶ *Id.*, ¶ 16.

⁷ *Ibid.*

⁸ *Id.*, ¶ 17.

⁹ *Id.*, ¶ 18.

¹⁰ *Id.*, ¶ 20.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

26. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

27. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

¹¹ *Ibid.*

¹² *Id.*, ¶ 22.

¹³ *Ibid.*

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

4.1

28.

29.

30.

¹⁴ *Id.*, ¶ 23.

¹⁵ *See* Expert Report of Dr. Jonathan L. Krein, August 1, 2022, Section 9.1.4.

¹⁶ Expert Report of L. Karl Branting, J.D., Ph.D., August 1, 2022, ¶ 24.

¹⁷ *Id.*

¹⁸ *Id.*, ¶ 25.

¹⁹ *Id.*, ¶ 24.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

31.

20

²¹ See Expert Report of Dr. Jonathan L. Krein, August 1, 2022, ¶ 106.

²² See Expert Report of Dr. Jonathan L. Krein, August 1, 2022, ¶ 107; R-LEGALEASE-00189134-R-LEGALEASE-00189139 ([REDACTED]).

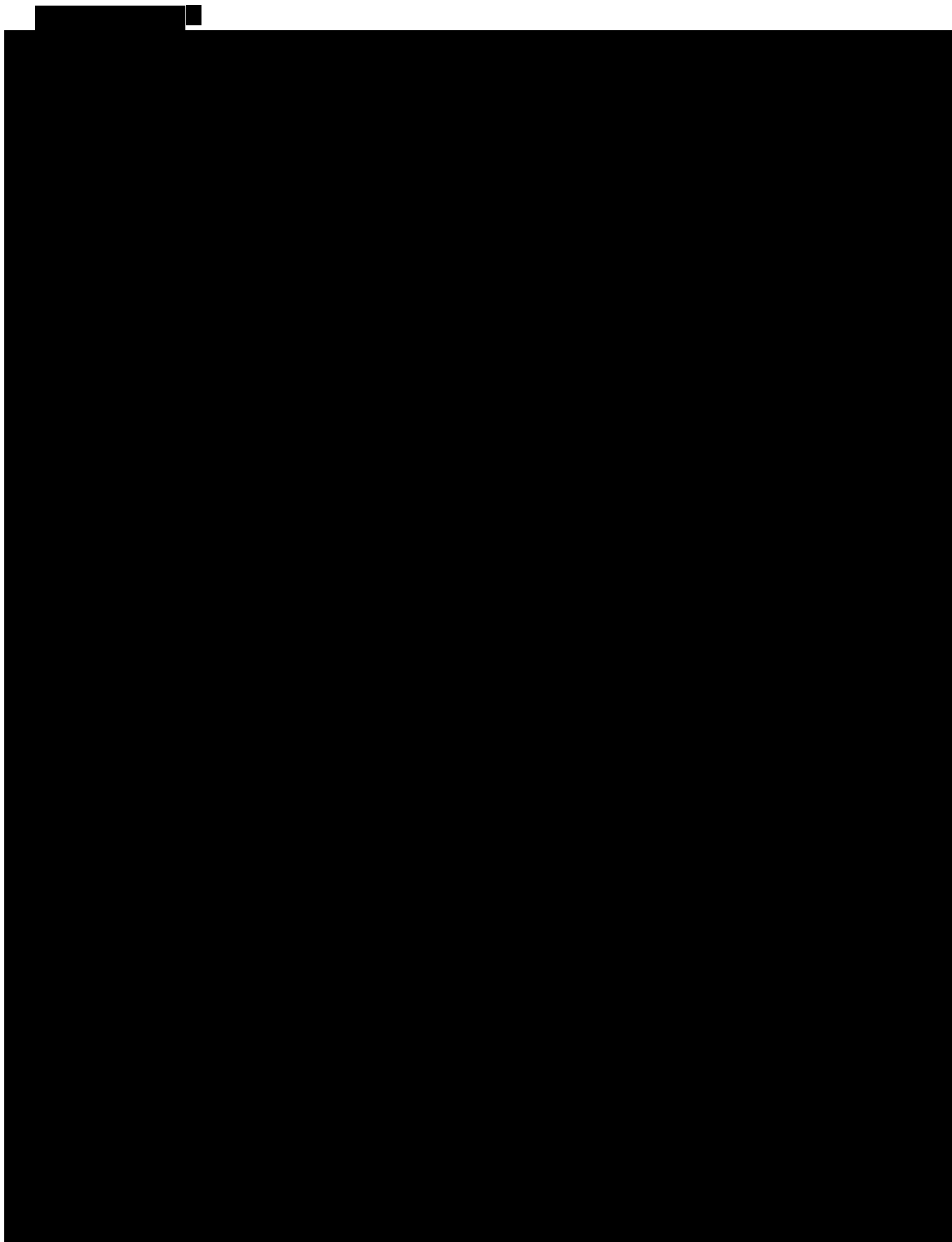
²³ See Expert Report of Dr. Jonathan L. Krein, August 1, 2022, ¶ 113.

²⁴ See Plaintiffs' Second Supplemental Response to ROSS' Interrogatory No. 1, March 23, 2022, pp. 33–37.

²⁵ See also Expert Report of Dr. Jonathan L. Krein, August 1, 2022, Appendix C.

²⁶ See, e.g., T. Hafeez Dep. Tr. 66:4–17.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY



HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

32.

[REDACTED]

4.2

[REDACTED]

33.

[REDACTED]

34.

[REDACTED]

²⁸

[REDACTED]

²⁹ Expert Report of L. Karl Branting, J.D., Ph.D., August 1, 2022, ¶ 30.

³⁰ *Id.*, ¶ 31.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

4.3 [REDACTED]

35. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

³¹ *Id.*, ¶¶ 32–33.

³² *Id.*, ¶¶ 34–36.

³³ *Id.*, ¶ 38.

³⁴ [REDACTED]

See Expert Report of Dr. Jonathan L. Krein, August 1, 2022, Section 9.17.

³⁵ Expert Report of L. Karl Branting, J.D., Ph.D., August 1, 2022, ¶ 20. [REDACTED]

[REDACTED]

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

36. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

37. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] *See* Expert Report of Dr. Jonathan L. Krein,
August 1, 2022, ¶ 146.

[REDACTED] *Id.*

³⁶ Expert Report of L. Karl Branting, J.D., Ph.D., August 1, 2022, ¶ 47.

³⁷ *Id.*, ¶ 49.

³⁸ *Id.*, ¶ 47.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

38. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

³⁹ See, e.g., ROSS-003391075 [REDACTED]
[REDACTED]
[REDACTED]; ROSS-010164290–ROSS-010164291 [REDACTED]
[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

⁴⁰ Expert Report of L. Karl Branting, J.D., Ph.D., August 1, 2022, ¶ 51.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

39. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

40. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

⁴¹ A. Arruda Dep. Tr. 275:23–276:12

[REDACTED]

⁴² Expert Report of L. Karl Branting, J.D., Ph.D., August 1, 2022, ¶ 51.

⁴³ *Ibid.*

44

Id., ¶ 50.

⁴⁶ *Id.*, ¶ 22.

⁴⁷ *Ibid.*

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

42.

[REDACTED]

[REDACTED]

43.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

44.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

⁴⁸ *Id.*, ¶ 62 (emphasis added).

⁴⁹ See Expert Report of Dr. Jonathan L. Krein, August 1, 2022, Section 9.1.4.

⁵⁰ Expert Report of L. Karl Branting, J.D., Ph.D., August 1, 2022, ¶ 63.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

45. [REDACTED]

[REDACTED]

[REDACTED]

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

46. [REDACTED]

47. [REDACTED]

⁵¹ *Id.*, ¶ 63

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

4.5

[REDACTED]

48.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

⁵² *Id.*, ¶ 65.

⁵³ *Id.*, ¶ 58.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

49.

[REDACTED]

50.

[REDACTED]

51.

[REDACTED]

⁵⁴ *Ibid.*

⁵⁵ *Ibid.*

⁵⁶ *Ibid.*

⁵⁷ *Id.*, ¶ 65.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

52. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

5. [REDACTED]

53. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

54. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

⁵⁸ Expert Report of L. Karl Branting, J.D., Ph.D., August 1, 2022, ¶ 39.

⁵⁹ Expert Report of Barbara Frederiksen-Cross, August 1, 2022, ¶ 16.

⁶⁰ *Id.*, p. 8.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

55.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

56.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

⁶¹ *Ibid.*

⁶² *Ibid.*

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

57. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

58. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

59. [REDACTED]

[REDACTED]

[REDACTED]

⁶³ ROSS's Supplemental Response to Interrogatory No. 11, February 22, 2022, pp. 34, 39.

⁶⁴ [REDACTED]

⁶⁵ Expert Report of Barbara Frederiksen-Cross, August 1, 2022, ¶¶ 74, 152. [REDACTED]

⁶⁶ *Id.*, pp. 42–46.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

60. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

61. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

⁶⁷ *Id.*, ¶¶ 149, 153.

⁶⁸ *Id.*, ¶ 149.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

62. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

63. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

⁶⁹ *Id.*, ¶ 153.

⁷⁰ *See, e.g.*, Expert Report of Dr. Jonathan L. Krein, August 1, 2022, Section 9.1.4.

⁷¹ Expert Report of Barbara Frederiksen-Cross, August 1, 2022, ¶ 153.

28

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

65. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

5.1.1 [REDACTED]

66. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

⁷⁶ *Ibid.*

⁷⁷ *Id.*, ¶¶ 16–17.

⁷⁸ I reserve all rights to supplement my opinion based on any explanations Ms. Frederiksen-Cross provides in the future.

⁷⁹ [REDACTED]

⁸⁰ *Id.*, p. 12.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

67. [REDACTED]

[REDACTED]

⁸¹ *Id.*, p. 12 and ¶ 26, respectively.

⁸² *Id.*, p. 12 and ¶ 32, respectively.

[REDACTED]

See, e.g., J. Ovbiagele Dep. Tr. 76:5–22

[REDACTED]

⁸³ Expert Report of Barbara Frederiksen-Cross, August 1, 2022, ¶¶ 26–27.

Id., ¶ 27.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

68. [REDACTED]

[REDACTED]

69. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] *Ibid.* Likewise, Ms. Frederiksen-Cross states that [REDACTED]

[REDACTED]

Ibid. [REDACTED]

⁸⁴ *Id.*, p. 12.

⁸⁵ *Id.*, ¶ 33.

⁸⁶ *Ibid.*

⁸⁷ It [REDACTED]

[REDACTED]

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

70. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

71. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

⁸⁸ *Id.*, ¶ 65.

⁸⁹ *Id.*, ¶¶ 66–67.

⁹⁰ *See* Thomson Reuters’ Second Supplemental Interrogatory Response to Interrogatory No. 1, March 23, 2202, pp. 33–37.

⁹¹ *See, e.g.*, C. Cahn Dep. Tr. 159:25–160:7 [REDACTED]

⁹² Expert Report of Barbara Frederiksen-Cross, August 1, 2022, ¶ 62

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

5.2 [REDACTED]

5.2.1 [REDACTED]

72. [REDACTED]

[REDACTED]

[REDACTED]

73. [REDACTED]

[REDACTED]

74. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

75. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

⁹³ [REDACTED]

⁹⁴ *Id.*, ¶ 90.

⁹⁵ *Id.*, ¶¶ 91, 95.

⁹⁶ *Id.*, ¶ 98 (incl. fn. 35).

⁹⁷ *Id.*, ¶¶ 99–101.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

76. [REDACTED]

[REDACTED]

⁹⁸ *Id.*, ¶¶ 104–105.

⁹⁹ *Id.*, ¶¶ 104–108.

¹⁰⁰ Expert Report of Dr. Jonathan L. Krein, August 1, 2022, ¶¶ 68–69.

¹⁰¹ *Id.*, ¶ 69; *see also* A. Martens Dep. Tr. 142:7–20 [REDACTED]

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

77.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

78.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

102

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

¹⁰³ Specifically, Ms. Frederiksen-Cross explains that she did this by

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] Expert Report of Barbara Frederiksen-Cross, August 1, 2022, ¶ 95.

[REDACTED]

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

79.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

80.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

e.g. [3].” *Id.*, ¶ 96.

[REDACTED]

¹⁰⁴ See prior fn.

¹⁰⁵ *Id.*, ¶ 99.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

81. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

¹⁰⁶ See Appendix B.

¹⁰⁷ [REDACTED]

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

5.2.2 [REDACTED]

82. [REDACTED]

83. [REDACTED]

84. [REDACTED]

¹⁰⁸ Expert Report of Barbara Frederiksen-Cross, August 1, 2022, ¶ 110.

¹⁰⁹ *Id.*, ¶ 123.

¹¹⁰ *Id.*, ¶ 120.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

85. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

86. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

¹¹¹ *Id.*, ¶ 123, emphasis added.

¹¹² *Id.*, ¶ 124, emphasis added.

¹¹³ *Id.*, ¶ 125, emphasis added.

¹¹⁴ *Id.*, ¶ 96.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

87.

[REDACTED]

88.

[REDACTED]

89.

[REDACTED]

¹¹⁵ *Id.*, ¶ 121.

¹¹⁶ *Id.*, ¶ 132.

[REDACTED] *See also, id.*, Exhibit O.

¹¹⁷ *Id.*, ¶¶ 129–130, 136.

¹¹⁸ *Id.*, ¶¶ 129–130.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

90. [REDACTED]

[REDACTED]

5.3 [REDACTED]

91. [REDACTED]

[REDACTED]

¹¹⁹ *Id.*, ¶¶ 117–138.

¹²⁰ *Id.*, ¶ 133.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

92. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

93. [REDACTED]

[REDACTED]

¹²¹ [REDACTED]

[REDACTED] See ROSS's Supplemental Response to Interrogatory No. 11, February 22, 2022, pp. 34, 39. If that is the case, I do not believe Ms. Frederiksen-Cross's results support ROSS's position for the reasons discussed below.

¹²² Expert Report of Barbara Frederiksen-Cross, August 1, 2022, p. 8.

¹²³ See Appendix B.

¹²⁴ Expert Report of Barbara Frederiksen-Cross, August 1, 2022, ¶ 152 and Exhibit H.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

94. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

95. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

¹²⁵ Expert Report of Barbara Frederiksen-Cross, August 1, 2022, p. 8.

¹²⁶ *Ibid.*

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

96. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

97. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

¹²⁷ *Ibid.*

¹²⁸ *Id.*, ¶ 153.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

98.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

99.

[REDACTED]

[REDACTED]

¹²⁹ *Id.*, pp. 42–43 and ¶¶ 152–153.

¹³⁰ *See* Appendix C.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

100. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

101. [REDACTED]

[REDACTED]

[REDACTED]

¹³¹ See Expert Report of Dr. Jonathan L. Krein, August 1, 2022, Appendix C.

¹³² See, e.g., Expert Report of Barbara Frederiksen-Cross, August 1, 2022, ¶¶ 123, 132.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

102. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

103. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

104. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

¹³³ *Id.*, Exhibit O at ¶ 6.

¹³⁴ *Id.*, ¶ 15.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

105.

[REDACTED]

[REDACTED]

[REDACTED]

106.

[REDACTED]

[REDACTED]

¹³⁵ See Appendix D.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

¹³⁶ Note that I used the same set of stop words as applied by Ms. Frederiksen-Cross. *See, id.*, ¶ 121.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

107.

[REDACTED]

108.

[REDACTED]

109.

[REDACTED]

¹³⁷ Expert Report of Dr. Jonathan L. Krein, August 1, 2022, ¶ 112 (incl. fn 162).

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

110. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

111. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

112. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

¹³⁸ Expert Report of L. Karl Branting, J.D., Ph.D., August 1, 2022, ¶¶ 35-36.

¹³⁹ Expert Report of Barbara Frederiksen-Cross, August 1, 2022, p. 8.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

113. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

114. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

¹⁴⁰ See Appendix E.

¹⁴¹ [REDACTED]

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

6. [REDACTED]

115. [REDACTED]

[REDACTED]

[REDACTED]

I declare under penalty of perjury that the foregoing is true and correct.

[REDACTED]

Respectfully submitted,



Dr. Jonathan L. Krein

¹⁴² See, e.g., Expert Report of Dr. Jonathan L. Krein, August 1, 2022, Section 9.1.4.

EXHIBIT AT

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

THOMSON REUTERS ENTERPRISE)	
CENTRE GMBH and WEST PUBLISHING)	
CORPORATION,)	
)	
Plaintiffs and	)	C.A. No. 20-613-SB
Counterdefendants,)	
)	
v.)	
)	
ROSS INTELLIGENCE INC.,)	
)	
Defendant and)	
Counterclaimant.)	

REPLY EXPERT REPORT OF DR. JONATHAN L. KREIN
HIGHLY CONFIDENTIAL - ATTORNEYS EYES ONLY

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

TABLE OF CONTENTS

1.	Introduction.....	1
2.	Background and Expert Qualifications.....	2
3.	Summary of Opinions.....	4
4.	The Branting Rebuttal Report.....	6
4.1	Dr. Branting’s Analysis of ROSS’s Training Process is Methodologically Unsound and Inconsistent With the Record.....	8
4.2	Dr. Branting’s Analysis of ROSS’s Training Data is Methodologically Unsound and Inconsistent With the Record.....	15
4.3	Dr. Branting’s Characterization of The Term “High-Quality” Data Is Inconsistent With ROSS’s Own Definition.....	21
5.	The Leiter Rebuttal Report.....	32
6.	The Cox Rebuttal Report.....	35
6.1	[REDACTED].....	36
7.	The Frederiksen-Cross Rebuttal Report.....	40
7.1	My Analysis and Methodology Are Not Flawed Because They Are Founded on the Facts of the Case, Sound Statistical Principles, and Knows Biases that Militate Against My Own Conclusions.....	41
7.1.1	Ms. Frederiksen-Cross Misinterpreted My Methodology (Fn. 162).....	42
7.1.2	Ms. Frederiksen-Cross Makes the Same Misguided Arguments From Her Opening Report.....	47
7.1.2.1	[REDACTED].....	47
7.1.2.2	ROSS’s Copying of the WKNS.....	50
7.1.2.3	[REDACTED].....	56
7.2	Appendix C And My Sampling Methodology Are Not Flawed.....	60
7.3	Ms. Frederiksen-Cross’s Cases Studies and Examples Are Misleading.....	68

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

7.4 [REDACTED] Is Flawed76

8. Conclusion87

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

APPENDICES

- Appendix A: List of Materials Considered
- Appendix B: List of Produced Bulk Memos Containing WKNS Topics in the Filename
- Appendix C: A random sample of 100 rows drawn from Appendix C to my opening report, along with a manual assessment of how similar each Bulk Memo question is to its corresponding West Headnote (on a scale of 0-2, indicating “low similarity,” “clearly derived from,” and “identical or nearly identical,” respectively).
- Appendix D: The same data as presented in Appendix C to my opening report, but with additional data cleaning applied.
- Appendix E: A random sample of 200 rows drawn from Appendix D to this report, along with a manual assessment of how similar each Bulk Memo question is to its corresponding West Headnote (on a scale of 0-2, indicating “low similarity,” “clearly derived from,” and “identical or nearly identical,” respectively).

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

1. [REDACTED]

1. [REDACTED]

[REDACTED]

[REDACTED]

2. [REDACTED]

[REDACTED]

¹ Expert Report of Dr. Jonathan L. Krein, August 1, 2022.

² Expert Report of Dr. Jonathan L. Krein, September 6, 2022.

³ Expert Report of L. Karl Branting, J.D., Ph.D., August 1, 2022.

⁴ Expert Report of Barbara Frederiksen-Cross, August 1, 2022.

⁵ Expert Report of L. Karl Branting, J.D., Ph.D., September 6, 2022.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

2. [REDACTED]

3. [REDACTED]

[REDACTED]

[REDACTED]

4. [REDACTED]

[REDACTED]

[REDACTED]

5. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

6. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

⁶ Expert Report of Barbara Frederiksen-Cross, September 6, 2022.

⁷ Expert Report of Alan J. Cox, Ph.D., September 6, 2022.

⁸ Expert Report of Richard Leiter, J.D., September 6, 2022.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

7. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

8. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

9. [REDACTED]

[REDACTED]

[REDACTED]

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

10.

[REDACTED]

3.

[REDACTED]

11.

[REDACTED]

12.

[REDACTED]

13.

[REDACTED]

14.

[REDACTED]

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

15.

[REDACTED]

16.

[REDACTED]

17.

[REDACTED]

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

4. [REDACTED]

18. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

19. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

20. [REDACTED]

[REDACTED]

[REDACTED]

21. [REDACTED]

[REDACTED]

⁹ Expert Report of L. Karl Branting, J.D., Ph.D., September 6, 2022, ¶¶ 4–10.

¹⁰ *Ibid.*

¹¹ *Id.*, ¶¶ 5–6.

¹² *Id.*, ¶ 7.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

22. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

23. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

¹³ *Id.*, ¶ 8.

¹⁴ *Id.*, ¶ 9.

¹⁵ *Id.*, ¶ 10.

¹⁶ *Ibid.*

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

4.1 [REDACTED]

24. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

25. [REDACTED]

[REDACTED]

[REDACTED]

26. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

¹⁷ *Id.*, ¶ 11.

¹⁸ *Ibid.*

¹⁹ Expert Report of Dr. Jonathan L. Krein, September 6, 2022, ¶ 37.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

27. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

²⁰ Expert Report of L. Karl Branting, J.D., Ph.D., August 1, 2022, ¶ 51.

²¹ A. Arruda Dep. Tr. 275:23–276:12 [REDACTED]

[REDACTED]

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

28. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

²² *Feist Publications, Inc. v. Rural Tel. Serv. Co.*, 499 U.S. 340, 348 (1991) (authors’ choices as to the selection and arrangement of “which facts to include, in what order to place them, and how to arrange the collected data so that they may be used effectively by readers” are protectable under copyright law).

²³ Expert Report of L. Karl Branting, J.D., Ph.D., September 1, 2022, ¶ 14 [REDACTED]

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

29. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

30. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

²⁴ Expert Report of L. Karl Branting, J.D., Ph.D., September 6, 2022, ¶ 12.

²⁵ *Id.*, ¶ 13.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

31. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

²⁶ See <https://medium.com/@AndrewArruda/hold-59effcd819b0>.

²⁷ T. van der Heijden Dep. Tr. 136:15-136:20.

²⁸ Expert Report of L. Karl Branting, J.D., Ph.D., September 6, 2022, ¶ 12.

²⁹ Expert Report of Dr. Jonathan L. Krein, August 1, 2022, ¶¶ 129–144.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

³⁰ Related to this, Dr. Branting also incorrectly states, [REDACTED]

[REDACTED]

[REDACTED] Expert Report of L. Karl Branting, J.D., Ph.D.,
September 6, 2022, ¶ 12.

[REDACTED]

³¹ Dr. Branting also states that [REDACTED]

[REDACTED] *Id* at fn. 2. The
terms [REDACTED] and [REDACTED] are vacuous in this context, or at least add nothing more
than conveyed by the phrase [REDACTED] Further, retraining a model [REDACTED]
is actually relatively frequent, both for machine learning and, especially, for the domain of the
law. Consider, for example, the testimony of Mr. Richard Leiter, another of ROSS's expert
witnesses, who stated: [REDACTED]

[REDACTED] Expert Report of
Richard Leiter, J.D., September 6, 2022, ¶ 14.

[REDACTED]

³² Dr. Branting also states: [REDACTED]

[REDACTED] Report of L. Karl Branting, J.D., Ph.D.,
September 6, 2022, ¶ 12. Again, this is incorrect and misleading. First, Dr. Branting cites to the
deposition of Jimoh Ovbiagele, but the cited passage is both inaccurate and unrelated to Dr.
Branting's point. [REDACTED] J. Ovbiagele Dep. Tr. 181:15, 181:22-
182:9.

[REDACTED]

[illegible]

³⁴ *Ibid.*

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

4.2

33.

34.

35.

³⁵ *Id.*, ¶ 15.

³⁶ *See generally* Expert Report of Dr. Jonathan L. Krein, September 6, 2022.

³⁷ Footnote 8 of Dr. Branting's report reads:

over half of the ROSS questions are *Id.*” Expert Report of L. Karl Branting, J.D., Ph.D., September 6, 2022, fn. 8.

³⁸ Expert Report of L. Karl Branting, J.D., Ph.D., September 6, 2022, ¶ 15.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

36.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

37.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

³⁹ *Id.*, ¶ 17.

⁴⁰ *Ibid.*

⁴¹ See Expert Report of Dr. Jonathan L. Krein, August 1, 2022, ¶ 106.

⁴² See Expert Report of Dr. Jonathan L. Krein, August 1, 2022, ¶ 107; R-LEGALEASE-00189134-R-LEGALEASE-00189139 [REDACTED]

⁴³ See Expert Report of Dr. Jonathan L. Krein, August 1, 2022, ¶ 113.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

38. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

⁴⁴ See Plaintiffs' Second Supplemental Response to ROSS' Interrogatory No. 1, March 23, 2022, pp. 33–37.

⁴⁵ See also Expert Report of Dr. Jonathan L. Krein, August 1, 2022, Appendix C.

⁴⁶ See, e.g., T. Hafeez Dep. Tr. 66:4–17 [REDACTED]

⁴⁷ Expert Report of Dr. Jonathan L. Krein, September 6, 2022, Section 4.1.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

39. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

40. [REDACTED]

[REDACTED]

[REDACTED]

48 [REDACTED]

[REDACTED] Expert Report of Dr. Jonathan L. Krein, August 1, 2022, ¶ 51.

⁴⁹ See LEGALEASE-00093066–LEGALEASE-00093074 [REDACTED]; *see also* C. Cahn Dep. Tr. 159:25–160:7 [REDACTED]

[REDACTED]

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

41. [REDACTED]

[REDACTED]

42. [REDACTED]

[REDACTED]

⁵⁰ ROSS-000177723 [REDACTED]
[REDACTED]; *see also* T. van der Heijden Dep. Tr. 347:20–22 [REDACTED].

⁵¹ Expert Report of L. Karl Branting, J.D., Ph.D., September 6, 2022, ¶ 18.

⁵² *Compare* TR-0179847-TR-0179854 [REDACTED], *with*, ROSS-010128683 [REDACTED].

⁵³ ROSS-003419784-ROSS-003419786 [REDACTED]
[REDACTED]

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

43. [REDACTED]

[REDACTED]

⁵⁴ Expert Report of L. Karl Branting, J.D., Ph.D., September 6, 2022, ¶¶ 24–27.

⁵⁵ *Id.*, ¶ 25.

⁵⁶ *Id.*, ¶ 26.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

44. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

4.3 [REDACTED]

45. [REDACTED]

[REDACTED]

[REDACTED]

⁵⁷ *Id.*, ¶ 28.

⁵⁸ *See* Expert Report of Dr. Jonathan L. Krein, August 1, 2022, ¶ 147.

48.

22

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

49. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

50. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

⁶³ Expert Report of L. Karl Branting, J.D., Ph.D., September 6, 2022, ¶ 20.

⁶⁴ See ROSS-009558441–ROSS-009558443 [REDACTED]

⁶⁵ Expert Report of L. Karl Branting, J.D., Ph.D., September 6, 2022, ¶¶ 21–22.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

51. [REDACTED]

[REDACTED]

52. [REDACTED]

[REDACTED]

[REDACTED]

⁶⁶ *Id.*, ¶ 20.

⁶⁷ *Ibid.*

⁶⁸ *Id.*, ¶ 21.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

53. [REDACTED]

[REDACTED]

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

54. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

⁶⁹ <https://xkcd.com/1007/>.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

55.

[REDACTED]

[REDACTED]

56.

[REDACTED]

⁷⁰ <https://online.stat.psu.edu/stat501/lesson/12/12.8>.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

57.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

58.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

⁷¹ Expert Report of L. Karl Branting, J.D., Ph.D., September 6, 2022, ¶¶ 20.

⁷² *Id.*, ¶ 22.

⁷³ *Ibid.*

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

59.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

60.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

⁷⁴ *Id.*, ¶ 23

[REDACTED]

⁷⁵ *Ibid.*

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

61. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

⁷⁶ It is also worth noting that Dr. Branting's ¶ 30 is, once again, beside the point.

[REDACTED]

⁷⁷ Dr. Branting also states, [REDACTED]

[REDACTED] *Id.*, ¶ 31. This statement is entirely inconsistent with the facts of this case, as I have explained above. Moreover, Dr. Branting makes this statement without any evidence, citations, or substantiation of any kind.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

5. [REDACTED]

62. [REDACTED]

[REDACTED]

63. [REDACTED]

[REDACTED]

⁷⁸ Expert Report of Richard Leiter, J.D., September 6, 2022, ¶¶ 1, 6.

⁷⁹ *Id.*, ¶ 6.

⁸⁰ Expert Report of Richard Leiter, J.D., September 6, 2022, ¶ 20.

⁸¹ See Expert Report of Dr. Jonathan L. Krein, August 1, 2022, ¶¶ 71–72; *see also* TR-0179838-TR-0179842 [REDACTED]; TR-0179830- TR-0179837 [REDACTED]; TR-0432528-TR-0432533 [REDACTED]; TR-0002864–TR-0003137 [REDACTED]; Plaintiffs’ Second Supplemental Response to ROSS’s Interrogatory No. 1, March 23, 2022, p. 9; L. Oliver Dep. Tr., pp. 198-211, 340-341.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

64.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

65.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

⁸² *Ibid.*

⁸³ *Ibid.*

⁸⁴ See *Broad. Music, Inc. v. Moor-Law, Inc.*, 484 F. Supp. 357, 362–63 (D. Del. 1980); see also *Ford Motor Co. v. Summit Motor Prods., Inc.*, 930 F.2d 277, 294 (3d Cir. 1991).

⁸⁵ C. Cahn Dep. Tr. 161:10-161:23

[REDACTED]

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

66.

[REDACTED]

⁸⁶ Expert Report of Dr. Jonathan L. Krein, September 6, 2022, ¶¶ 28–32.

⁸⁷ Expert Report of Richard Leiter, J.D., September 6, 2022, ¶ 13.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

67. [REDACTED]

[REDACTED]

[REDACTED]

6. [REDACTED]

68. [REDACTED]

[REDACTED]

69. [REDACTED]

[REDACTED]

70. [REDACTED]

[REDACTED]

71. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

⁸⁸ A full list of Bulk Memos with filenames corresponding to the WKNS Digest Topics is attached hereto as Appendix B.

⁸⁹ Expert Report of Alan J. Cox, Ph.D., September 6, 2022, ¶ 15.

⁹⁰ *Ibid.*

⁹¹ *Ibid.*

⁹² *Ibid.*

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

72.

[REDACTED]

73.

[REDACTED]

6.1

[REDACTED]

74.

[REDACTED]

⁹³ *Ibid.*

⁹⁴ Expert Reports of James E. Malackowski, August 1, 2022 and September 6, 2022.

⁹⁵ J. Obviagele Dep. Tr. 171:7–11

[REDACTED]

⁹⁶ ROSS-003332311.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

75. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

76. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

⁹⁷ Expert Report of Alan J. Cox, Ph.D., September 6, 2022., ¶ 21.

⁹⁸ Expert Report of Alan J. Cox, Ph.D., September 6, 2022., ¶¶ 19–20.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

77. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

78. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

⁹⁹ Expert Report of Alan J. Cox, Ph.D., September 6, 2022, ¶ 20.

¹⁰⁰ See <https://medium.com/@AndrewArruda/hold-59effcd819b0>

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

79. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

80. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

¹⁰¹ See Expert Report of Alan J. Cox, Ph.D., September 6, 2022, ¶¶ 27–35.

¹⁰² *Am. Geophysical Union v. Texaco Inc.*, 60 F.3d 913, 930 (2d Cir. 1994).

¹⁰³ *Id.*, ¶ 29.

¹⁰⁴ *Id.*, ¶¶ 36–40.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

7. [REDACTED]

81. [REDACTED]

[REDACTED]

82. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

83. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

84. [REDACTED]

[REDACTED]

¹⁰⁵ Expert Report of Barbara Frederiksen-Cross, September 6, 2022, ¶¶ 9–15.

¹⁰⁶ *Id.*, ¶¶ 9–11.

¹⁰⁷ *Id.*, ¶ 15.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

7.1

[REDACTED]

85.

[REDACTED]

[REDACTED]

¹⁰⁸ Moreover, I note that Ms. Frederiksen-Cross repeatedly states the same arguments numerous times throughout her report without adding anything further of substance, which gives the false impression that she has found a greater number of alleged flaws than she actually has.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

86.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

87.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

7.1.1

88.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

¹⁰⁹ Expert Report of Barbara Frederiksen-Cross, September 6, 2022, ¶¶ 25–39.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

89. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

90. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

¹¹⁰ Expert Report of Dr. Jonathan L. Krein, August 1, 2022, fn. 162.

¹¹¹ *Ibid.*

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

91. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

92. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

¹¹² *Ibid.*

¹¹³ *See* Expert Report of Dr. Jonathan L. Krein, August 1, 2022, Section 9.1.4; *see also* Expert Report of Dr. Jonathan L. Krein, September 6, 2022, ¶¶ 43, 70, 83.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

93. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

94. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

¹¹⁴ Expert Report of Dr. Jonathan L. Krein, September 6, 2022, ¶¶ 76–80.

¹¹⁵ *Ibid.*

¹¹⁶ Expert Report of Barbara Frederiksen-Cross, September 6, 2022, ¶¶ 36–37.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

95. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

96. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

¹¹⁷ *Ibid.*; see also, *id.*, ¶ 25.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

7.1.2

[REDACTED]

97.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

7.1.2.1

[REDACTED]

98.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

99.

[REDACTED]

[REDACTED]

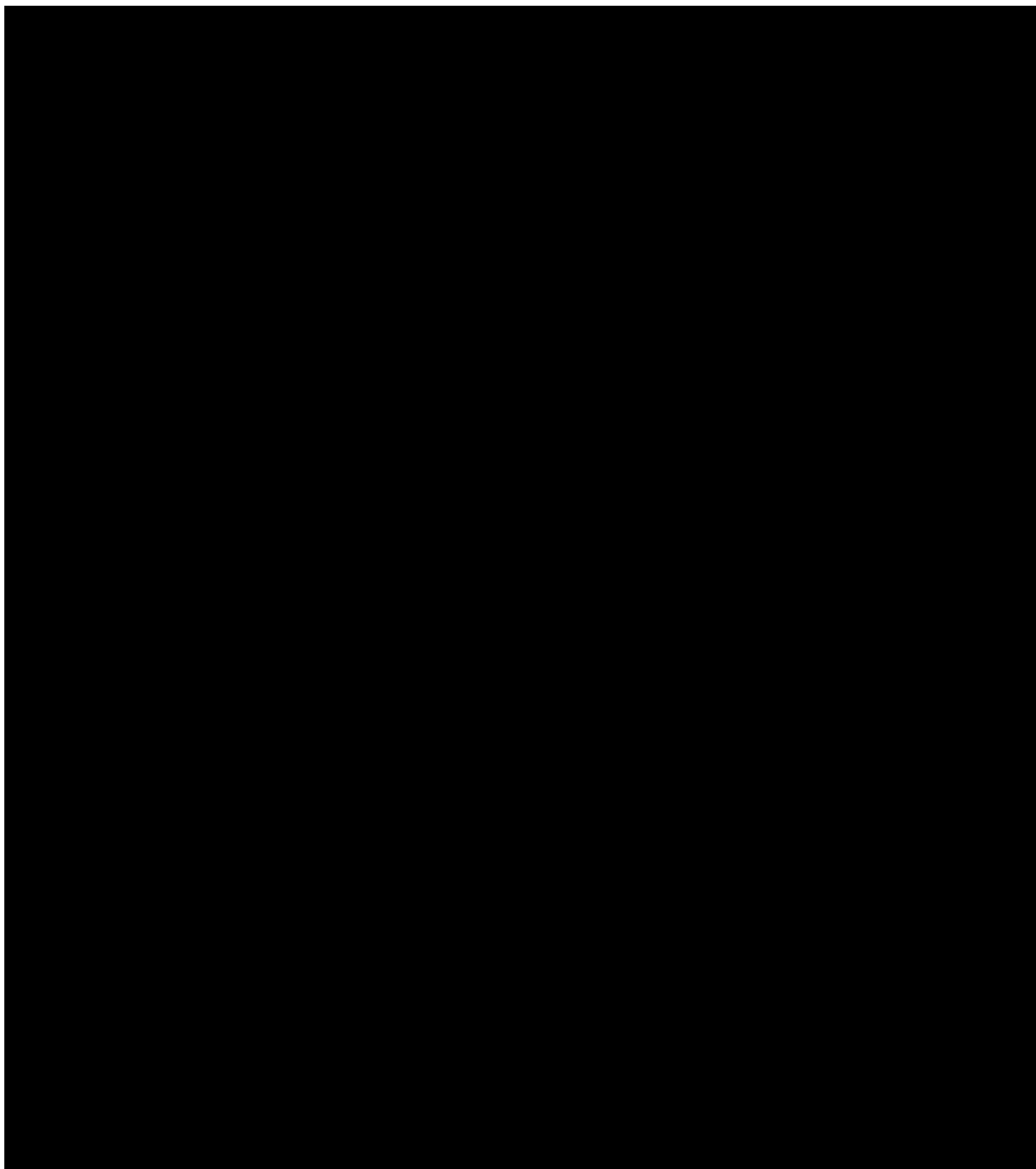
[REDACTED]

[REDACTED]

[REDACTED]

¹¹⁸ *Id.*, ¶ 17.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY



100.

[REDACTED]

[REDACTED]

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

101. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

102. [REDACTED]

[REDACTED]

[REDACTED]

103. [REDACTED]

[REDACTED]

¹¹⁹ Expert Report of Barbara Frederiksen-Cross, September 6, 2022.

¹²⁰ *Id.*, ¶ 18.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

104.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

105.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

¹²¹ *Ibid.*

¹²² *Ibid.*

¹²³ C. Cahn Dep. Tr. 161:10-161:23

[REDACTED]

¹²⁴ Expert Report of Dr. Jonathan L. Krein, September 6, 2022, ¶¶ 28–32.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

106. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

107. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

¹²⁵ Expert Report of Barbara Frederiksen-Cross, September 6, 2022, ¶ 100.

¹²⁶ *Id.*, ¶ 102.

¹²⁷ *Id.*, ¶¶ 104–105.

¹²⁸ Expert Report of Dr. Jonathan L. Krein, August 1, 2022, ¶ 113.

¹²⁹ Expert Report of Barbara Frederiksen-Cross, September 6, 2022, ¶¶ 106–108.

¹³⁰ *Id.*, ¶ 109 (emphasis in original).

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

108. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

¹³¹ Expert Report of Dr. Jonathan L. Krein, August 1, 2022, Section 9.1.4.

¹³² Expert Report of Barbara Frederiksen-Cross, September 6, 2022, ¶¶ 110–116.

¹³³ *Id.*, ¶ 110.

¹³⁴ *Ibid.*

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

109. [REDACTED]

[REDACTED]

¹³⁵ Expert Report of Dr. Jonathan L. Krein, August 1, 2022, ¶ 146.

¹³⁶ ROSS-003419784-ROSS-003419786 [REDACTED]

¹³⁷ Expert Report of Barbara Frederiksen-Cross, September 6, 2022, ¶¶ 112–116

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

110. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

111. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

¹³⁸ *Id.*, ¶ 122.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

112. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

113. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

114. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

¹³⁹ Expert Report of Dr. Jonathan L. Krein, August 1, 2022, ¶ 109.

¹⁴⁰ Expert Report of Barbara Frederiksen-Cross, September 6, 2022, ¶ 123.

¹⁴¹ *Id.*, ¶¶ 124–126.

¹⁴² Expert Report of Barbara Frederiksen-Cross, September 6, 2022, ¶¶ 21–24.

¹⁴³ *Ibid.*

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

115.

[REDACTED]

116.

[REDACTED]

¹⁴⁴ Id., ¶ 22.

¹⁴⁵ See C. Cahn Dep. Tr. 68:3–9

[REDACTED], 194:19–195:5

¹⁴⁶ See T. Hafeez Dep. Tr. 152:7–21

[REDACTED]

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

117.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

¹⁴⁷ Expert Report of Barbara Frederiksen-Cross, September 6, 2022, ¶ 22.

¹⁴⁸ LEGALEASE-00059362.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

118. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

119. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

¹⁴⁹ Expert Report of Barbara Frederiksen-Cross, September 6, 2022, ¶ 22.

¹⁵⁰ Expert Report of Dr. Jonathan L. Krein, September 6, 2022, ¶ 109.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

7.2

120.

121.

¹⁵¹ Expert Report of Dr. Jonathan L. Krein, August 1, 2022, ¶ 112, incl. fn 162.

¹⁵² Expert Report of Barbara Frederiksen-Cross, September 6, 2022, ¶¶ 41–42.

¹⁵³ *Ibid.*

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

122. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

123. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

124. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

¹⁵⁴ Expert Report of Dr. Jonathan L. Krein, September 6, 2022, ¶ 109.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

125.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

¹⁵⁵ LEGALEASE-00140943-LEGALEASE-00140944.

¹⁵⁶ ROSS-003330518-ROSS-003330519.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

126.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

127.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

¹⁵⁷ Expert Report of Barbara Frederiksen-Cross, September 6, 2022, ¶¶ 41–54.

¹⁵⁸ *Id.*, ¶ 12.

¹⁵⁹ *Id.*, ¶ 48.

¹⁶⁰ *Id.*, ¶¶ 45–46.

¹⁶¹ Expert Report of Barbara Frederiksen-Cross, August 1, 2022, ¶¶ 131–132.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

128.

[REDACTED]

129.

[REDACTED]

- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]

130.

[REDACTED]

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

131. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

¹⁶² Expert Report of Dr. Jonathan L. Krein, August 1, 2022, ¶ 112, incl. fn 162.

¹⁶³ *See, e.g.*, Expert Report of Barbara Frederiksen-Cross, August 1, 2022, ¶¶ 80–89.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

132.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

133.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

134.

[REDACTED]

135.

[REDACTED]

136.

[REDACTED]

164

[REDACTED]

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

7.3 [REDACTED]

137. [REDACTED]

138. [REDACTED]

139. [REDACTED]

¹⁶⁵ Expert Report of Barbara Frederiksen-Cross, September 6, 2022, ¶¶ 67–97.

¹⁶⁶ Id., ¶¶ 93–97.

¹⁶⁷ *Ibid.*; The West Headnote cited in Appendix C reads [REDACTED]

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

140. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

141. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

¹⁶⁸ TR-0541943.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

142.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

143.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

144.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

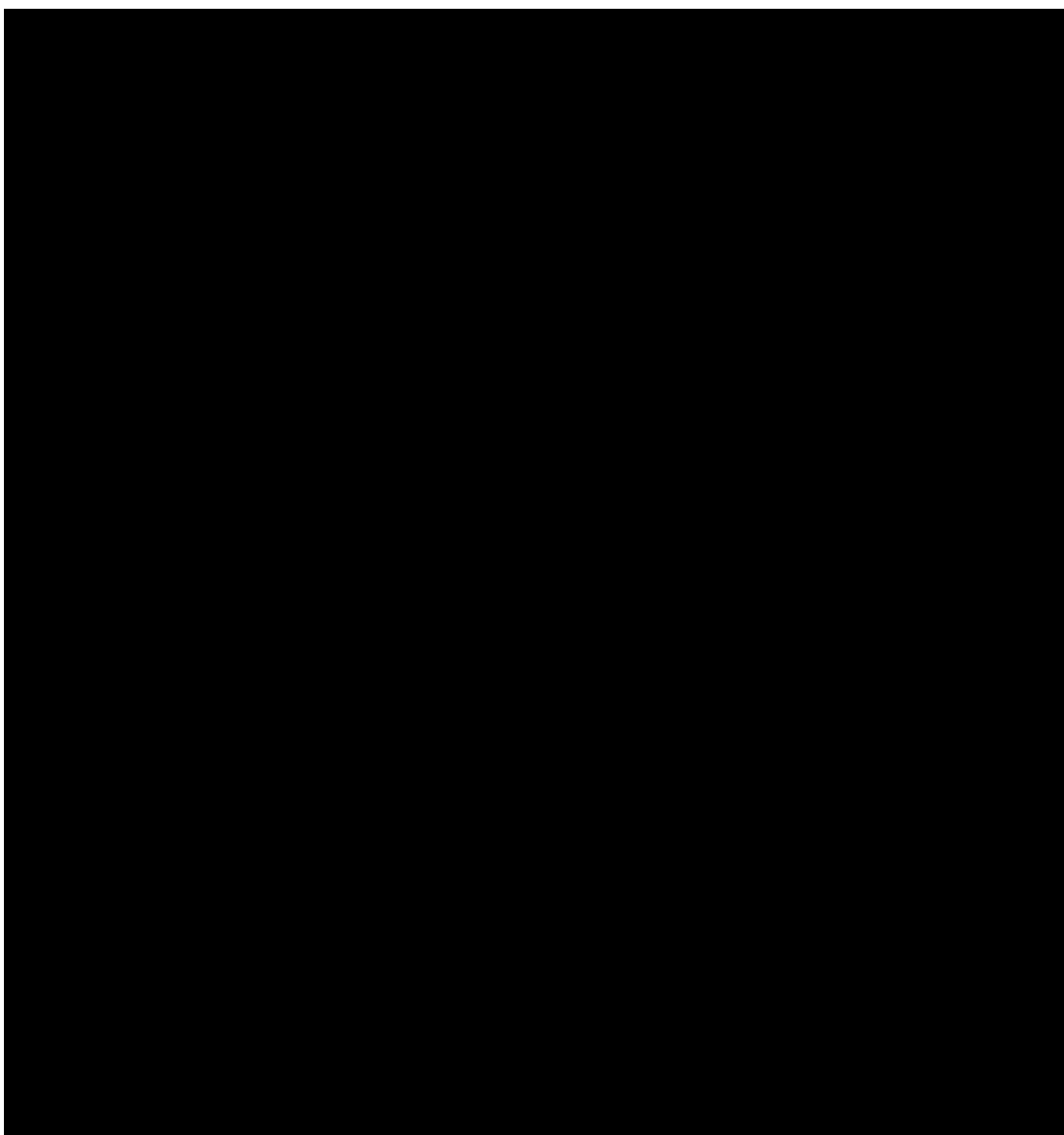
[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY



145.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

146.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

¹⁶⁹ Expert Report of Dr. Jonathan L. Krein, September 6, 2022, ¶ 100.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY



147.

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

148. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

149. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

170 [REDACTED]

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

7.4 [REDACTED]

150. [REDACTED]

[REDACTED]

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

151. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

152. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

153. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

¹⁷¹ Expert Report of Barbara Frederiksen-Cross, September 6, 2022, ¶ 130.

¹⁷² *Id.*, ¶ 132.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

154. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

155. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

156. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

¹⁷³ *Ibid.*

¹⁷⁴ *Id.*, ¶ 133.

¹⁷⁵ *Id.*, ¶ 134.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

157.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

158.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

¹⁷⁶ *Ibid.*

¹⁷⁷ *Id.*, ¶ 135.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

159. [REDACTED]

[REDACTED]

[REDACTED]

160. [REDACTED]

[REDACTED]

¹⁷⁸ *Ibid.*

¹⁷⁹ *Id.*, ¶ 139.

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

161.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

162.

[REDACTED]

[REDACTED]

[REDACTED]

¹⁸⁰ *Id.*, ¶ 15

[REDACTED]

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

163.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

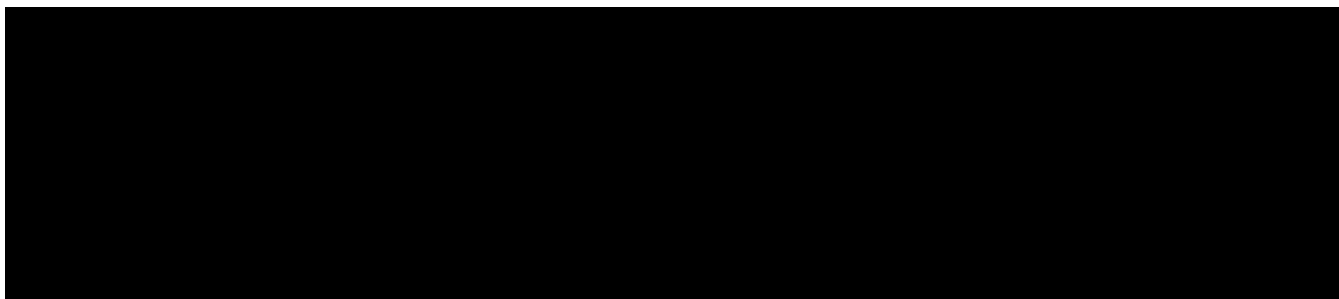
[REDACTED]

[REDACTED]

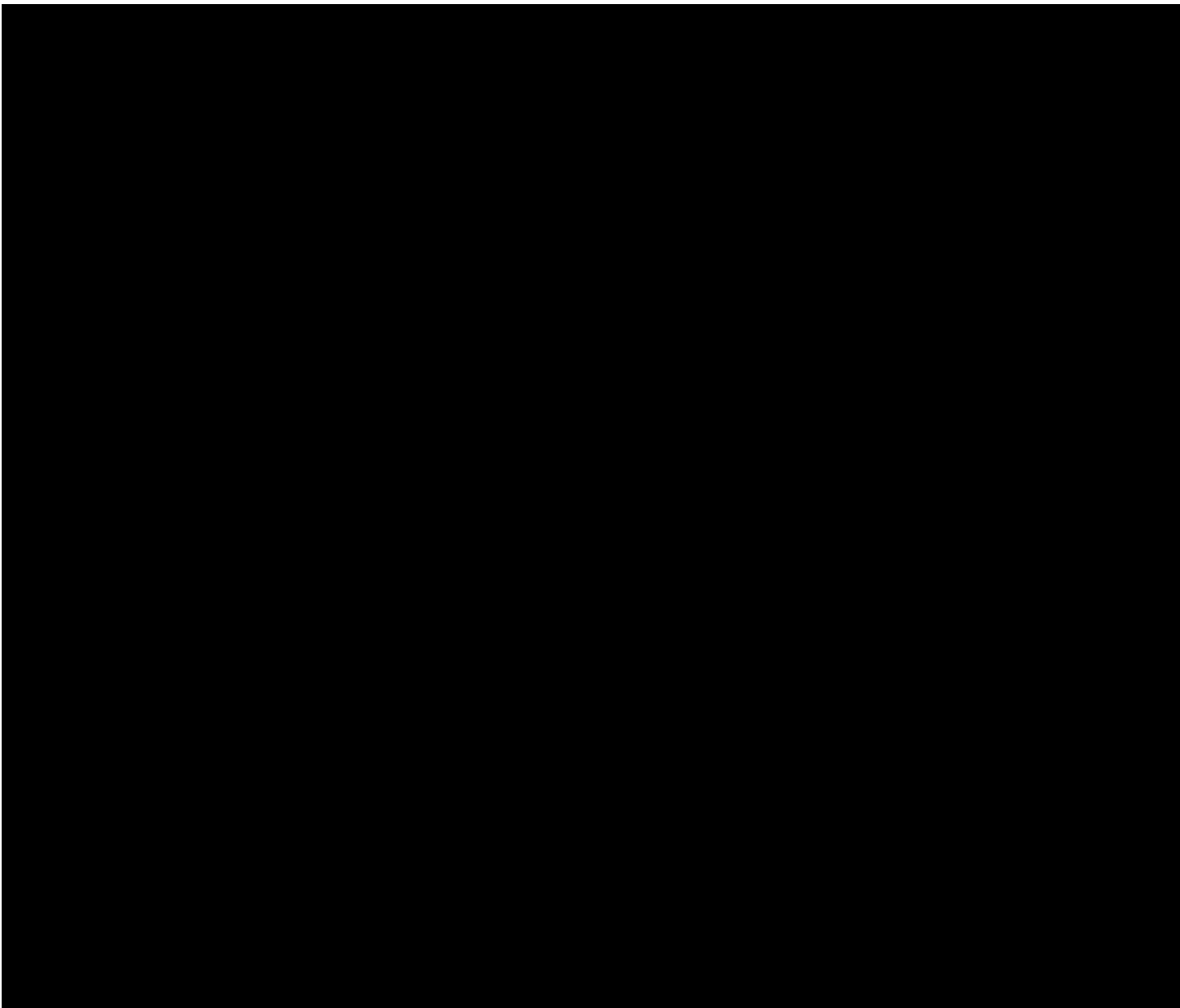
[REDACTED]

[REDACTED]

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY



HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY



164.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

165. [REDACTED]

[REDACTED]

[REDACTED]

166. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

¹⁸¹ [REDACTED]

[REDACTED] (see Expert Report of Barbara Frederiksen-Cross, August 1, 2022, ¶¶ 129-130, 136-137), thus turning her results toward her conclusions in spite of the data.

¹⁸² *Id.*, ¶ 15

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

167. [REDACTED]

[REDACTED]

¹⁸³ *Ibid.*

¹⁸⁴ *Ibid.*

¹⁸⁵ *Ibid.*

HIGHLY CONFIDENTIAL - ATTORNEY EYES ONLY

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

8. [REDACTED]

168. [REDACTED]

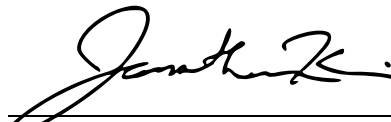
[REDACTED]

[REDACTED]

I declare under penalty of perjury that the foregoing is true and correct.

[REDACTED]

Respectfully submitted,



Dr. Jonathan L. Krein

EXHIBIT AU

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

THOMSON REUTERS ENTERPRISE
CENTRE GMBH and WEST PUBLISHING
CORPORATION,

Plaintiffs,

v.

ROSS INTELLIGENCE INC.,

Defendant.

Case No. 1:20-cv-00613-SB

**REPORT OF DEFENDANTS' EXPERT
PROFESSOR RICHARD LEITER, J.D.**

TABLE OF CONTENTS

- I. INTRODUCTION**
- II. QUALIFICATIONS**
- III. MATERIALS CONSIDERED**
- IV. SUMMARY OF OPINIONS**
- V. THE FORMATION OF THE WEST KEY NUMBER AND HEADNOTE SYSTEM**
- VI. THE INFLUENCE OF DIGESTS PREDATING WEST'S *THE AMERICAN DIGEST***
- VII. THE ADOPTION OF THE INDEXING SYSTEM BY OTHER DIGESTS**
- VIII. THE EVOLUTION OF THE WEST INDEX SYSTEM**
- IX. THE EVOLUTION OF THE SUB-TOPICS**

I. [REDACTED]

1. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

II. [REDACTED]

2. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
3. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
4. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]

5. [REDACTED]

6. [REDACTED]

7. [REDACTED]

I. [REDACTED]

8. [REDACTED]

II. [REDACTED]

9. [REDACTED]

[REDACTED]

[REDACTED]

10. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

III. [REDACTED]

11. [REDACTED]

[REDACTED] [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] [REDACTED]

[REDACTED]

¹ James Kent, “Of Reports of Judicial Decisions,” in *Commentaries on American Law Vol. 1* (1826). In Lecture XXI, “Of Reports of Judicial Decisions,” Kent makes a compelling case for restraint in the publication of judicial decisions, but also for a systematic indexing and organization of them. *Id.* at 439.

² U.S. Nat’l. Comm’n on Libraries and Informational Science, *A Comprehensive Assessment of Public Information Dissemination, Final Report Vol. 1* at 1-18 *et seq.* (2001).

[REDACTED]

12. [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]

³ Kent C. Olsen, Morris L. Cohen & Robert C. Berring, *How to Find the Law* at 17 (9th ed. 1989)

⁴ See generally West Publishing Co., Preface to *The Federal Cases Comprising Cases Argued and Determined in the Circuit and District Courts of the United States*, Book 1 (1894) for a discussion of the process by which the cases for the set were compiled.

13.

⁵ The reasons for the lack of publication of the Federal Courts was partly due to their lack of general jurisdiction through most of the Nineteenth Century. *See generally* Edwin Surrency, *History of the Federal Courts* (1st ed. 1987); *see also* Review essay of *The Federal Reporter* published in THE N.Y. TIMES, Oct. 2, 1880, at 8.

⁶ Morris L. Cohen & Robert C. Berring, *How to Find the Law* at 20-22 (8th ed. 1983).

⁷ Authors of the early nominatives developed special interests; thus, we find reporters called *Jones' Evidence Cases*, *Smith's Commerce Cases*, and *Rowe, Interesting Cases*, plus many more that include reporters on maritime law, family law, and other topics, each named after the special interests of their respective authors. The value of these reporters relied heavily upon the expertise of the reporter to select the most important, useful, and valuable cases from among the much larger volume of cases being decided by the judges. *See generally* Cohen, *supra* note 6 at “Chapters 3 & 4” for an excellent summary of the process. Comparatively, today, it is my understanding that West editors are trained in broad indexing across many topics and not have similar specialized subject matter expertise.

⁸ In addition to ALR, there were others including William M. McMinney & N. Noyes Greene, *Annotated Cases American and English: Containing the Most Important Cases Selected from the Current American, Canadian, and English Report* (1906-1911); William M. McMinney & N. Noyes Greene, *Annotated Cases American and English: Containing the Most Important Cases Selected from the Current American, Canadian, and English Report* (1912-1918)); Lawyers' Co-operative Publishing Co., *The Lawyer's Reports Annotated* (1888-1905) Vol. 1-70 (1906).

⁹ Access was facilitated by a combination of indexes and digests.

14.

¹⁰ Thomas H. Reynolds, B. P. Crum, Royal A. Gunnison & John Mason Ross, *Report of the Special Committee on Reports and Digests*, 2 A.B.A. J. 618 (1916); “Minutes of the Nineteenth Annual Meeting,” *Association of American Law Schools* 48 at 117-119 (Dec. 29-31, 1921). There were many other calls for simplification of the case law over the years; for example, the American Bar Association Committee on Classification and Restatement of the Law was organized at least by 1919. See Urban A. Lavery, *Finding the Law: Legal Classification in America - 1880-1940*, 25 A.B.A. J. 383, 383 n. 2 (1939).

During the 1920s, the American Law Institute led this effort to simplify the case law. The American Law Institute was organized on February 23rd, 1923. The organization meeting was attended by the Chief Justice of the United States Supreme Court, as well as other representatives of the Supreme Court, representatives of the United States Circuit Courts of Appeals, the highest courts of a majority of the States, the Association of American Law Schools, the American and State Bar Associations, and the National Conference of Commissioners on Uniform State Laws. The meeting was held in response to an invitation issued by a voluntary committee, of which Mr. Elihu Root was chairman, on the vote a Permanent Organization for the Improvement of the Law, the Committee having prepared a report recommending the establishment of an American Law Institute. *See* Introduction to Restatement (First) of Contracts n. 2 (Am. L. Inst. 1932).

“The Committee on the Establishment of a Permanent Organization for the Improvement of the Law,” led by Elihu Root, George Wickersham, and William Draper Lewis reported to the members of the legal profession that the “law is unnecessarily uncertain and complex,” and as a result, there is a “general dissatisfaction with the administration of justice.” See *The Story of ALI*, AMERICAN LAW INSTITUTE, <https://www.ali.org/about-ali/story-line/> (last visited Jun. 6, 2022).

¹¹ See Richard A. Danner, *Oh, the Treatise!*, 111 MICH. L. REV. 821, 825 (2013).

¹² John H. Langbein, *Chancellor Kent and the History of Legal Literature*, 93 COLUM. L.REV. 547, 597 (1993).

[REDACTED]

[REDACTED]

15. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

16. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

¹³ Lavery, *supra* note 10 at 383 n. 3. At the time of Lavery’s Article, there were an estimated 1.75 million cases, with 25,000 cases being added every year. It was estimated that the American Digest at that time contained seven million headnotes. *Id.*

¹⁴ See “Benjamin Vaughan Abbott,” 3 GREEN BAG 1, 1 (1891) (Benjamin Vaugh Abbott spent a year at Harvard Law School and finished his education in New York in 1852).

¹⁵ *Id.*

¹⁶ Benjamin Vaughan Abbott & Austin Abbott, *Digest of New York Statutes and Reports from the Earliest Period to the Year 1860* (1864).

¹⁷ See Section VI *infra*.

17. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

18. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

19. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

20. [REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

¹⁸ Benjamin Vaughan Abbott & Austin Abbott, *Digest of the Reports of the United States Courts, and of the Acts of Congress, from the Organization of the Government to the Year* (1867-1880).

¹⁹ Benjamin Vaughan Abbott, *Abbott's National Digest: A Digest of the Reports of the United States Courts* (1886).

²⁰ Frederick C. Hicks, *Materials and Methods of Legal Research* at 203 (1923).

²¹ *Id.*

²² West Publishing Co., *Century Edition of the American Digest: A Complete Digest of All Reported American Cases from the Earliest Times to 1896* (1897) (“*Century Digest*”).

²³ West Publishing Co., *Decennial Edition of the American Digest: A Complete Digest of All Reported Cases from 1897 to 1906* (1908) (“*First Decennial Digest*”).

[REDACTED]

21. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

22. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

23. [REDACTED]

[REDACTED]

²⁴ West Publishing Co., *American Digest Classification Scheme: A Logical Analysis of the Law for the Use of Indexers and Digest Makers* at 1 (2nd ed. 1898) This theorem and in-depth explanation are repeated in West Publishing Co., *American Digest Classification Scheme: A Logical Analysis of the Law for the Use of Indexers and Digest Makers* at iii (3rd ed. 1901); West Publishing Co., *American Digest Main Heads and Subdivisions of Classification Scheme: A Logical Analysis of the Law for the Use of Indexers and Digest Makers* at iii (4th ed. 1904); and West Publishing Co., *American Digest Main Heads of Classification Scheme: A Logical System of the Law for the Use of Indexers and Digest Makers* at iii (5th ed. 1916).

²⁵ *Id.* Benjamin Vaughn Abbott came up with the theorem before 1880. *See Correspondence*, 22 ALB. L. J. 179, 179, (1880) (letter to the editor by Benjamin V. Abbott titled “Uniform Indexes.”). “In formulating the American Digest Classification Scheme, the categories described [by Abbott] were taken as a basis.” John A. Mallory, *The Theory of the American Digest Classification Scheme*, 1 AM. L. SCH. REV. 184, 188 (1904). *See also* John Doyle, *WESTLAW and the American Digest Classification Scheme*, 84 LAW. LIBR. J. 229-32 (1992).

²⁶ *Id.* at 5-11. *See also* Hicks, *supra* note 20. Today, the topic and key number system has been reduced to 363 topics. *See* fn. 45, *infra*.

²⁷ Mallory, *supra* note 25 at 186 (emphasis added).

[REDACTED]

[REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]

[REDACTED]

IV. [REDACTED]

24. [REDACTED]

[REDACTED]

[REDACTED]

25. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

²⁸ *Id.* at 185 (quoting *Wambaugh's Study of Cases*, §§ 115, 118).

²⁹ *American Digest Main Heads and Subdivisions*, *supra* note 24.

³⁰ *Id.*

³¹ *See* Exhibit 3.

³² *Id.*

26. [REDACTED]
[REDACTED]
[REDACTED]

27. [REDACTED]
[REDACTED]

V. [REDACTED]

28. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

29. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

³³ William W. Marvin, *West Publishing Company: Origins, Growth, Leadership* at 69 (1969).

³⁴ *Id.*

³⁵ *Id.*

30. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

31. [REDACTED]
[REDACTED]

³⁶ *Id.* .
³⁷ *American Digest, Main Heads of Classification*, *supra* note 24.
³⁸ *Id.*
³⁹ Comparison of “Contracts” from Bancroft, *California Digest of Official Report (Series 3 & 4)* (revised in 1997) to *First Decennial Digest*, *supra* note 23.

32. [REDACTED]

[REDACTED] [REDACTED] [REDACTED]

[REDACTED] [REDACTED]

33. [REDACTED]

[REDACTED] [REDACTED]

⁴⁰ See *First Decennial Digest*, *supra* note 23; see also Figure 1.

⁴¹ See *Chodos v. West Publishing Co.*, 292 F.3d 992, 1994 (9th Cir. 2002).

⁴² See Michael O. Eshleman, A History of the Digests, 110 LAW LIBR. J. 235, 245, comparing the *General Digest*, published by the Lawyers' Co-operative Publishing Company, to the *United States Digest*.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

VI. [REDACTED]

34. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

⁴³ *First Decennial Digest*, *supra* note 23 at vii.

⁴⁴ *Id.*

⁴⁵ See Table 2 at Exhibit 4 [REDACTED]

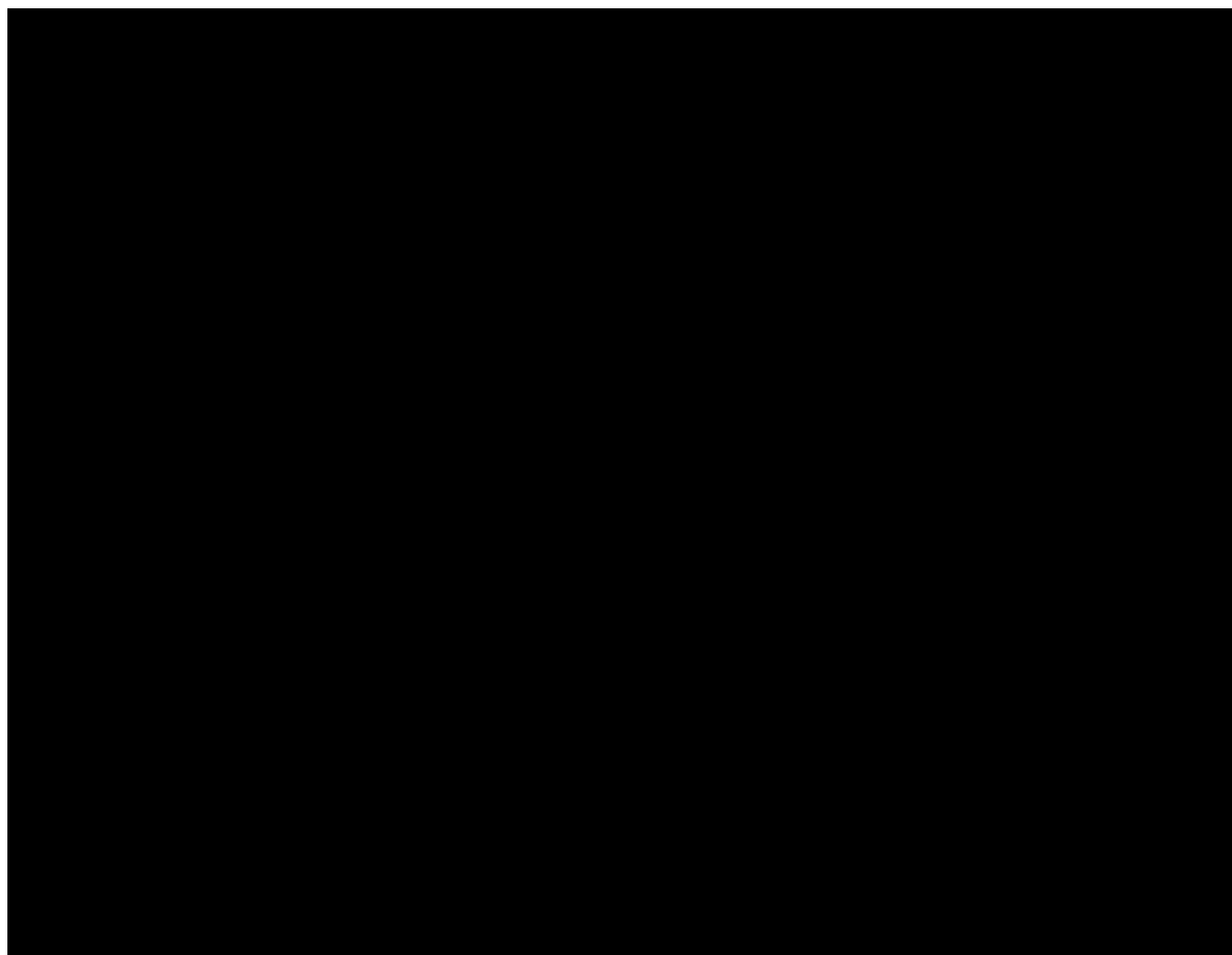
[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

⁴⁶ *Id.*; see also Figure 2.



35. [REDACTED]
[REDACTED]
[REDACTED] [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

36. [REDACTED]
[REDACTED]
[REDACTED] [REDACTED]

⁴⁷ See Table 3 of Exhibit 5 [REDACTED]

⁴⁸ *Id.*

⁴⁹ Table 2 at Exhibit 4, *supra* note 45.

[REDACTED]

37. [REDACTED]

38. [REDACTED]

VII. [REDACTED]

39. [REDACTED]

⁵⁰ *Id.*

⁵¹ Table 3 at Exhibit 5, *supra* note 47.

⁵² Table 2 at Exhibit 4, *supra* note 45.

⁵³ *West's Analysis of American Law 2021 Edition: Guide to the American Digest System* (2021).

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

41. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

42. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

43. [REDACTED]

[REDACTED]

[REDACTED]

⁵⁴ Video: *Dan Dabney on Reclassifying Headnotes in the Key Number System*, THOMSON REUTERS \ LEGAL CURRENT, <https://www.legalcurrent.com/dan-dabney-on-reclassifying-headnotes-in-the-key-number-system/> (last visited Mar. 24, 2022).

⁵⁵ The Topic Name is misleading as the other commonly included intellectual property topics, Patents and Trademarks, are each their own top-level West topics.

⁵⁶ Daniel Dabney, former chief taxonomist at West, is on the record stating that there are 18,754 “structural lines in the hierarchy” that are not postable. Daniel P. Dabney, *The Universe of Thinkable Thoughts: Literary Warrant and West’s Key Number System*, 99 Law Libr. J 229, 236 ¶ 33 (In 2007, the key number system had “109,183 lines, of which 90,429 are postable, and the remaining 18,754 are structural lines in the hierarchy.”). This means that there must be a similar amount of “In general” key numbers embedded within the current 363 top-level topics of the West topic and key number system.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

44. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

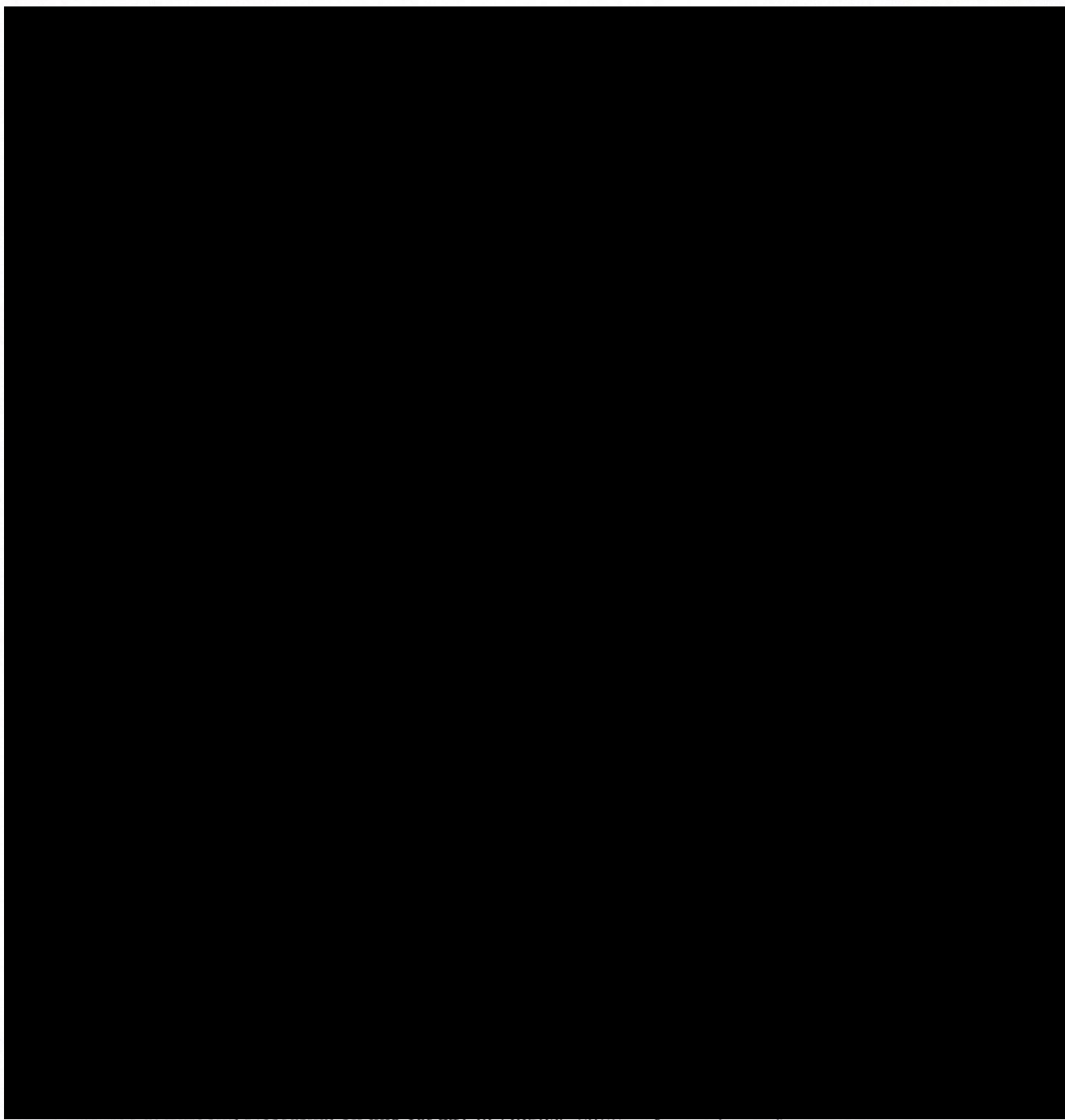
[REDACTED]
[REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

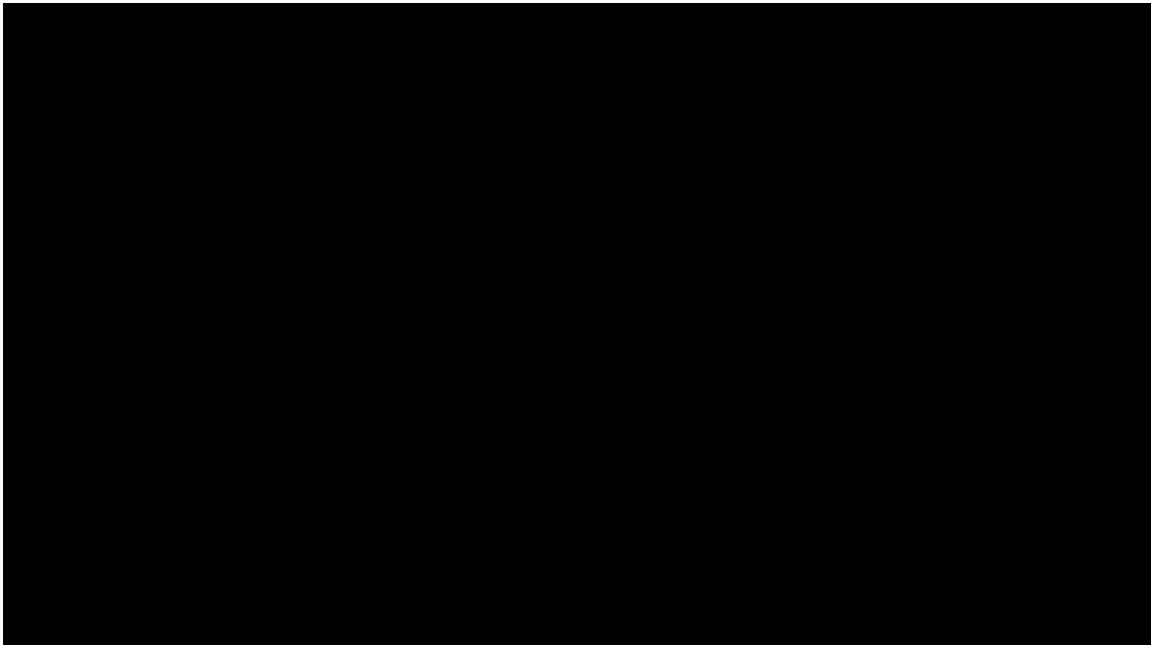
45. [REDACTED]
[REDACTED]



Richard A. Leiter

Professor Richard A. Leiter

EXHIBIT AV



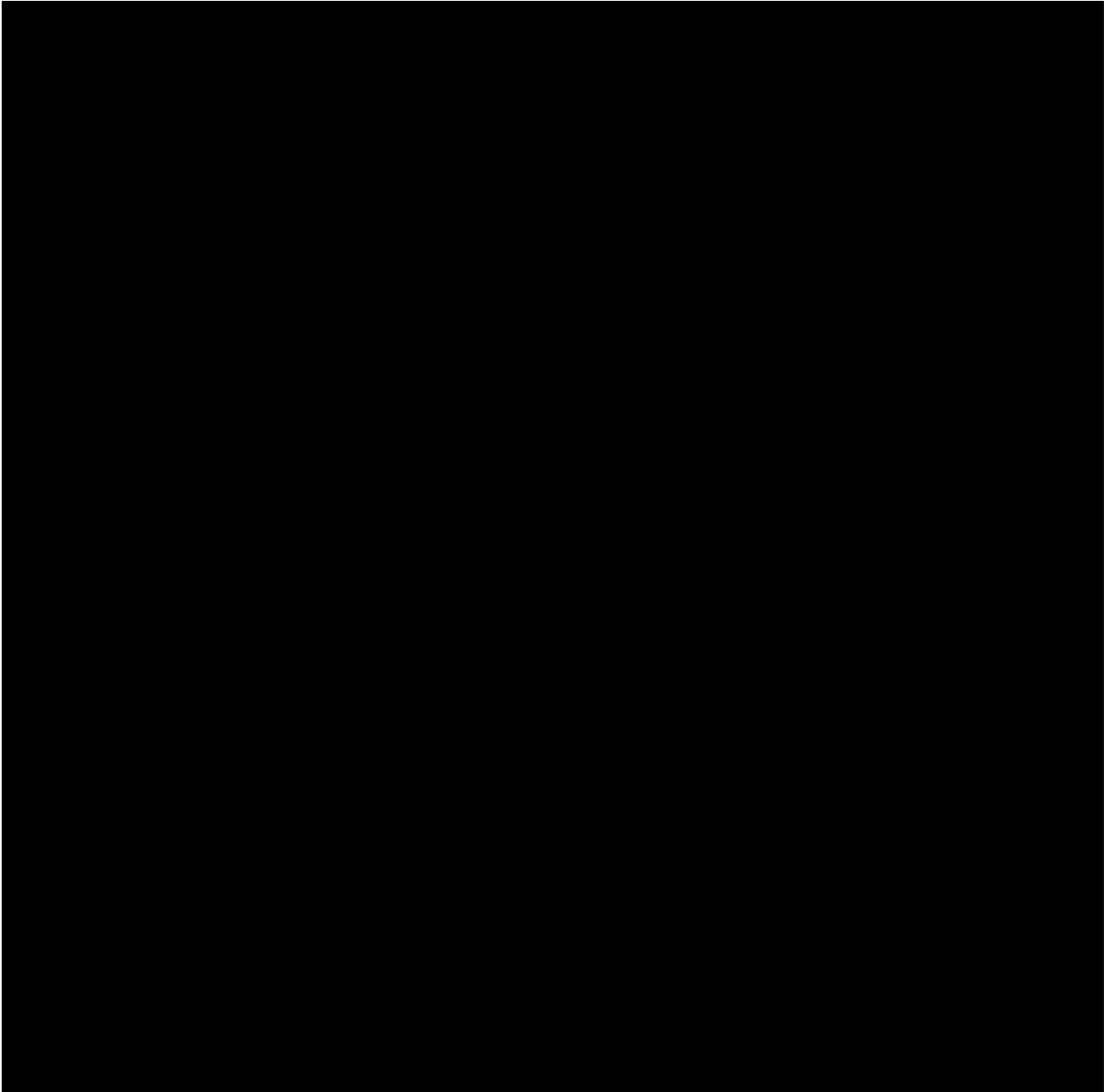


EXHIBIT AW

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

THOMSON REUTERS ENTERPRISE
CENTRE GMBH and WEST PUBLISHING
CORPORATION,

Plaintiffs,

v.

ROSS INTELLIGENCE INC.,

Defendant.

Case No. 1:20-cv-00613-SB

CONFIDENTIAL

**REBUTTAL REPORT TO THE REPORT OF PLAINTIFFS' EXPERT DR. JONATHAN
L. KREIN BY DEFENDANT'S EXPERT PROFESSOR RICHARD LEITER, J.D.**

TABLE OF CONTENTS

- I. INTRODUCTION**
- II. EXPERIENCE AND QUALIFICATIONS**
- III. CONFIDENTIALITY**
- IV. MATERIALS CONSIDERED**
- V. THE TOP LEVEL DIGEST TOPICS ARE NOT CREATIVE OR UNIQUE TO WEST, RATHER THEY FOLLOW THE LOGICAL AND ORDINARY LANGUAGE OF THE LAW**

I. [REDACTED]

1. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

II. [REDACTED]

2. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

3. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

III. [REDACTED]

4. [REDACTED]

[REDACTED]

[REDACTED]

IV. [REDACTED]

5. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

V. [REDACTED]

6. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

¹ Krein Report, ¶ 113.

7. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

8. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

9. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

10. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

11. [REDACTED]

[REDACTED]

12. [REDACTED]

[REDACTED]

13. [REDACTED]

[REDACTED]

² Sir John Comyns' *A Digest of the Laws of England* (5th ed. 1822) ("Comyns' *Digest*").

³ John Mews' *Digest of English Case Law Contain the Reported Decision of the Superior Courts, and a Selection from Those if the Irish Courts* (1898) ("Mews' *Digest*").

[REDACTED]

[REDACTED]

[REDACTED]

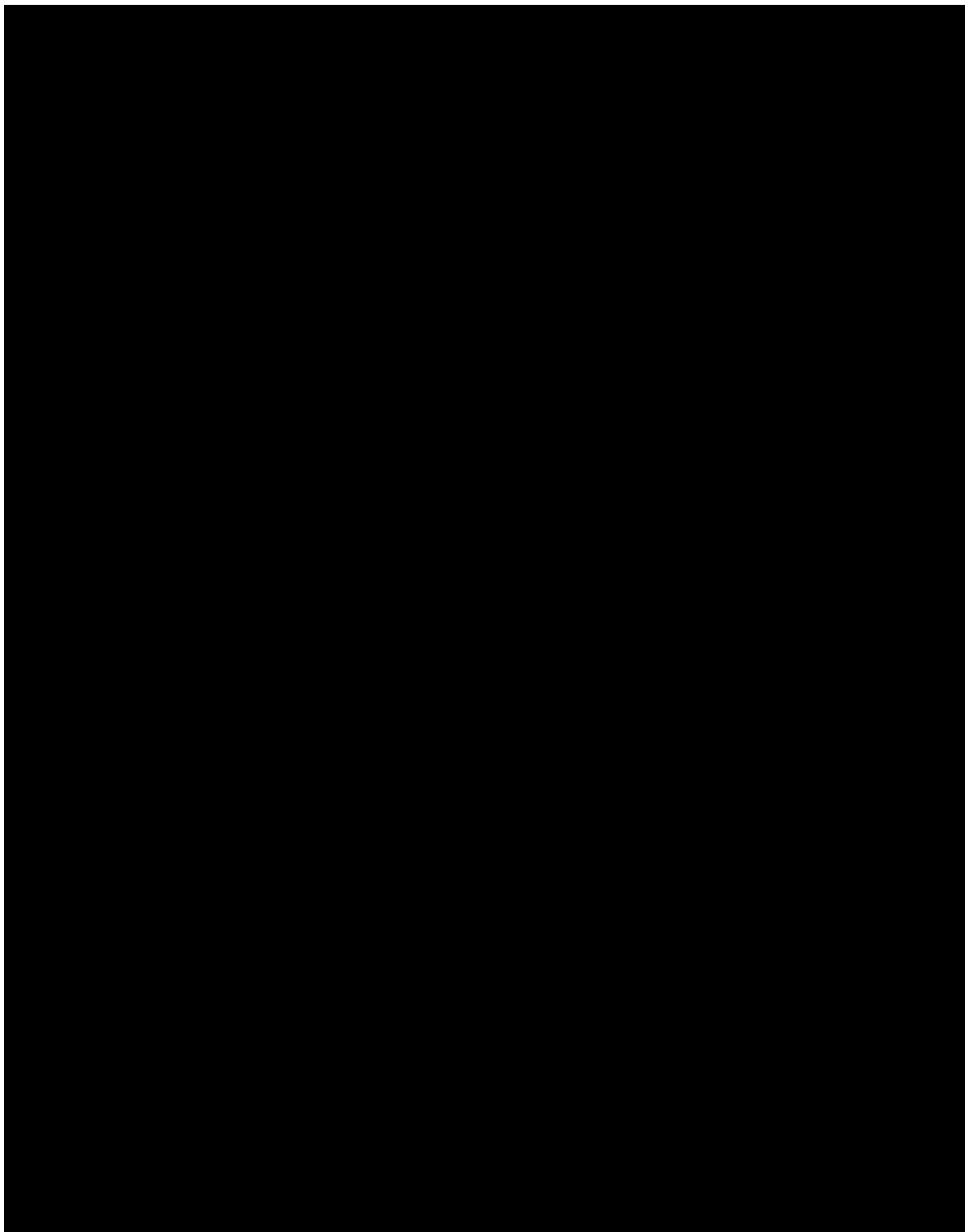
[REDACTED]

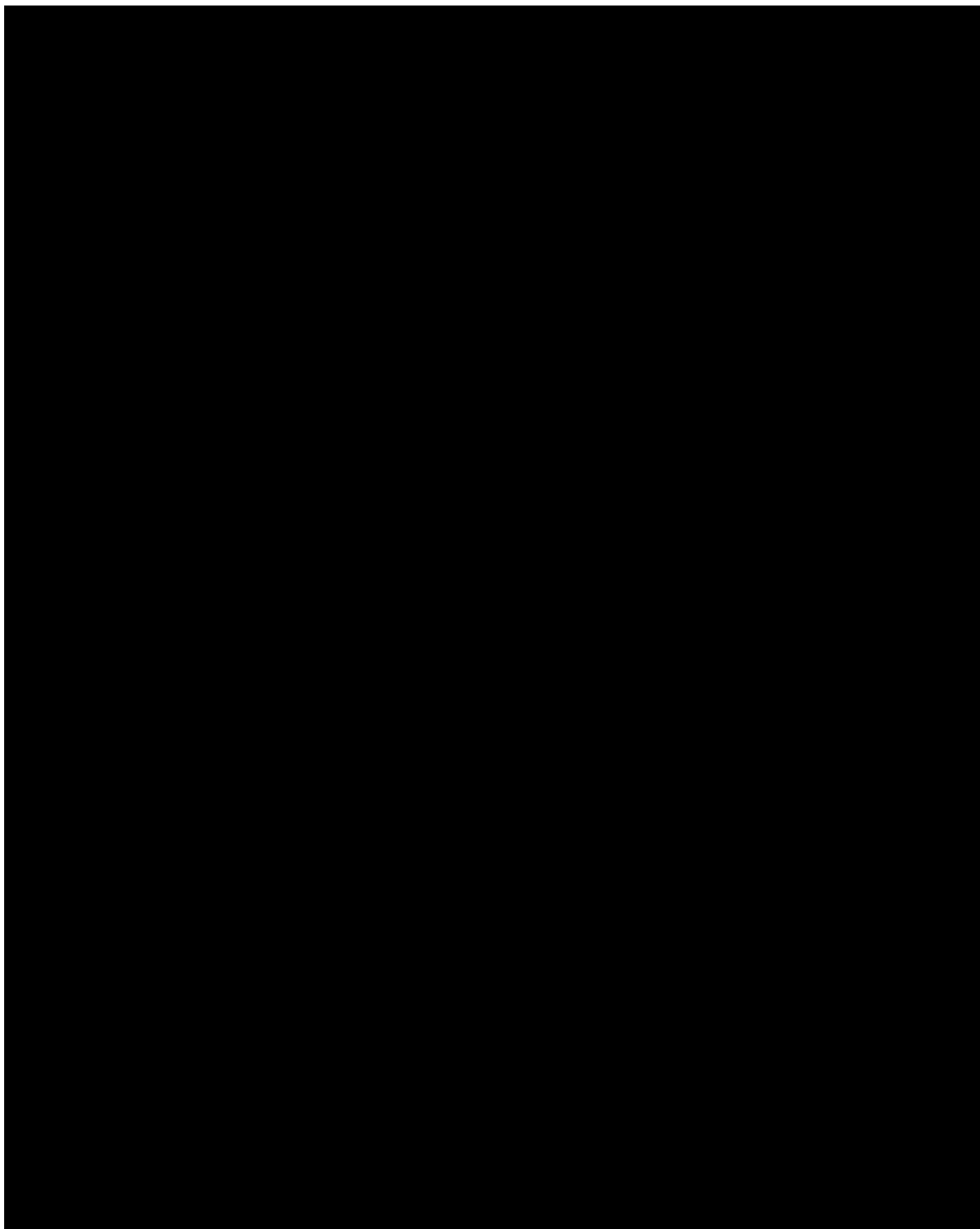
[REDACTED]

[REDACTED]

⁴ West first debuted WKNS, its classification system the *Century Edition of the American Digest: A Complete Digest of All Reported American Cases from the Earliest Times to 1896* (1897). Opening Report, ¶¶ 20-22 and accompanying notes.

⁵ Krein Report, ¶ 113; *Id.*, chart at p. 58-60.







14. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

⁶ COMMODITY FUTURES TRADING COMMISSION,
<https://www.cftc.gov/LawRegulation/CommodityExchangeAct/index.htm> (last visited Sep.2, 2022).

⁷ *The Origins of the EPA*, UNITED STATES ENVIRONMENTAL PROTECTION AGENCY,
<https://www.epa.gov/history/origins-epa> (last accessed Sep. 2, 2022).

[REDACTED]

15. [REDACTED]

[REDACTED]

16. [REDACTED]

[REDACTED]

⁸ Opening Report, Exs. 4, 5.

⁹ *Id.*; West Publishing Co., *Decennial Edition of the American Digest: A Complete Digest of All Reported Cases from 1897 to 1906* (1908).

¹⁰ Editors, *Ernest Freund – Pioneer of Administrative Law*, 29 U. CHICAGO LAW REV. 755, 755-56 (1961).

¹¹ John Bouvier, “Chimin,” *A Law Dictionary Adapted to the Constitution and Laws of the United States of American and of the Several States of the American Union* (6th ed. 1856) (“CHIMIN. This is a corruption of the French word chemin, a highway.”).

¹² Opening Report, ¶¶ 34-38 and accompanying notes.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

17. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

¹³ *Id.*, ¶¶ 10, 16-19 and accompanying notes.

¹⁴ Charles Folsom, *A Catalogue of the Faculty and Students of the Law School in Harvard University for the Second Term of the Academical [sic] Year 1842-43*, HARVARD LAW SCHOOL at 9 (1842) [https://iif.lib.harvard.edu/manifests/view/drs:8866717\\$13i](https://iif.lib.harvard.edu/manifests/view/drs:8866717$13i) (last visited Aug. 31, 2022).

¹⁵ J. T. Figures, *A Catalogue of the Law School of Cumberland University at Lebanon Tennessee for the Academical [sic] Year 1848-49*, CUMBERLAND UNIVERSITY LAW SCHOOL at 4 (1848) https://upload.wikimedia.org/wikipedia/commons/8/8d/Catalogue_of_the_Law_School_of_Cumberland_University%2C_1848-1849_%28IA_184849L%29.pdf (last visited Aug. 31, 2022).

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

18. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

19. [REDACTED]

[REDACTED]

[REDACTED]

¹⁶ *Id.*

¹⁷ *Full Course Listing*, NEBRASKA COLLEGE OF LAW <https://law.unl.edu/full-course-listing/> (last visited Sep. 2, 2022).

¹⁸ West Publishing Co., *American Digest Main Heads and Subdivisions of Classification Scheme; A Logical Analysis of the Law for the Use of Indexers and Digest Makers* (4th ed. 1904) (“*American Digest Main Heads*”).

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

20. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

¹⁹ West Publishing Co., “Prospectus,” *American Digest Main Heads* at 21.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]



Professor Richard A. Leiter

EXHIBIT AX



OCEAN TOMO®

A PART OF  **JS|HELD**

THOMSON REUTERS ENTERPRISE CENTRE GMBH AND WEST PUBLISHING CORPORATION

v.

ROSS INTELLIGENCE INC.

**UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

Civil Action No. 1:20-cv-00613-SB

EXPERT REPORT OF JAMES E. MALACKOWSKI

August 1, 2022

**HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER**



1	Firm Background and Qualifications	1
2	Assignment	4
3	Summary of Opinions and Analyses	5
3.1	Summary of Opinions.....	5
3.2	Bases for Opinions and Analyses.....	7
4	Summary of Information Considered	8
5	Relevant Entities	10
5.1	Thomson Reuters Corporation	10
5.2	ROSS	11
5.3	Third-Parties.....	11
6	Background Information.....	13
6.1	Legal Research Platforms	13
6.2	Artificial Intelligence in Legal Research Platforms	25
6.3	Artificial Intelligence in Plaintiffs' Legal Research Platform Development	26
6.4	ROSS's Product Development.....	28
6.5	Value of Westlaw Content	34
7	Event Timeline.....	36
8	Plaintiffs' Copyright Infringement Allegations	39
9	Copyright Infringement Remedies	41
10	Plaintiffs' Tortious Interference with Contract Allegation	43
10.1	Available Remedies for Tortious Interference with Contract	44
11	Analysis of Actual Damages	45
11.1	Assessment of the Market Applicable to the Copyrights at Issue	45
11.2	Assessment of Actual Damages Resulting from the Alleged Infringement.....	49
12	ROSS's Profits Attributable to Alleged Infringement	58
12.1	ROSS's Gross Revenue Attributable to Infringement	58
13	Statutory Damages	59
14	Signature.....	61

HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER

Page 1



[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER



[REDACTED]

**HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER**



2 [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]
[REDACTED]

¹ Stipulated Protective Order, May 13, 2021.

**HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER**



3 [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

3.1 [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]
[REDACTED]

3.1.1 [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]
[REDACTED]

HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER



[REDACTED]

[REDACTED]

3.1.2 [REDACTED]

[REDACTED]

3.1.3 [REDACTED]

[REDACTED]

² Schedule 1.0.

³ Schedule 1.1.

⁴ *Great Am. Opportunities, Inc. v. Cherrydale Fundraising, LLC*, No. 3718-VCP, 2010 WL 338219, at * 27 (Del. Ch. Jan. 29, 2010).

⁵ Schedule 6.0.

⁶ Schedule 4.0.

⁷ Schedule 4.0.

**HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER**



3.2

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER

Page 8



[REDACTED]

**HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER**



5 [REDACTED]

5.1 [REDACTED]

5.1.1 [REDACTED]

5.1.2 [REDACTED]

⁸ Thomson Reuters Corporation 2021 Annual Report, pp. 102, 116.

⁹ Business, Thomson Reuters Corporation 2021 Annual Report, p. 2.

¹⁰ 2022 Strategic Growth Priorities, Thomson Reuters Corporation 2021 Annual Report, p. 6.

¹¹ Principal Subsidiaries, Thomson Reuters Corporation 2021 Annual Report, p. 189.

¹² Complaint, May 6, 2020, p. 3.

¹³ Andrew Martens, 30(b)(6) Deposition March 25, 2022, pp. 145-147; [REDACTED], TR-0359503-TR-0359560 at TR-0359503-TR-0359504 and TR-0359509-TR-0359542.

¹⁴ Andrew Martens, 30(b)(6) Deposition March 25, 2022, pp. 151-152; [REDACTED], TR-0359401-TR-0359443 at TR-0359401-TR-0359403 and TR-0359410-TR-0359441.

¹⁵ Andrew Martens, 30(b)(6) Deposition March 25, 2022, pp. 157-159; [REDACTED], TR-0359959-TR-0360216 at TR-0359962-TR-0359968; [REDACTED], TR-0359564-TR-0359954.

¹⁶ Principal Subsidiaries, Thomson Reuters Corporation 2021 Annual Report, p. 189.

¹⁷ Complaint, May 6, 2020, p. 3.

**HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER**



[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

5.2

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

5.3

5.3.1

[REDACTED]

[REDACTED]

¹⁸ [REDACTED], TR-0002758-TR-0002768.

¹⁹ Tomas van der Heijden, 30(b)(6) Deposition March 17, 2022, pp. 210-211, 215-216.

²⁰ Andrew Martens, 30(b)(6) Deposition March 25, 2022, p. 156; [REDACTED] TR-

0359181-TR-0359186; [REDACTED] TR-0359202-TR-0359204.

²¹ Andrew Martens, 30(b)(6) Deposition March 25, 2022, pp. 153-155, 201-203; [REDACTED] TR-0358927-TR-0358948 at TR-0358928-TR-0358930 and TR-0358943-TR-0358947; [REDACTED]

[REDACTED] TR-0358967-TR-0358988 at TR-0358967, TR-0358969-TR-0358970, TR-0358986-TR-0358987.

²² Andrew Arruda, Deposition March 30, 2022, pp. 11-12, 37-38.

²³ Andrew Arruda, Deposition March 30, 2022, p. 51.

²⁴ [REDACTED] ROSS-009721062.

²⁵ [REDACTED] TR-0037677-TR-0037680 at TR-0037677.

²⁶ [REDACTED] TR-0039933-TR-0039942 at TR-0039933.

**HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER**



[REDACTED]

5.3.2 [REDACTED]

[REDACTED]

²⁷ Tariq Hafeez, 30(b)(6) Deposition May 26, 2022, p. 21.

²⁸ Andrew Arruda, Deposition March 30, 2022, p. 269.

²⁹ [REDACTED]

[REDACTED] TR-0002758-TR-0002768 at TR-0002758-TR-0002760.

³⁰ Low-Cost Legal Databases, Georgetown Law Library, <https://guides.ll.georgetown.edu/freelowcost/low-cost>.

³¹ Welcome to Fastcase, Fastcase, <https://www.fastcase.com/>.

³² Longtime Competitors Fastcase and Casemaker Merge, Reshaping the Legal Research Landscape, Bob Ambrogi, LawSites, January 5, 2021, <https://www.lawnext.com/2021/01/longtime-competitors-fastcase-and-casemaker-merge-reshaping-the-legal-research-landscape.html>.

³³ Low-Cost Legal Databases, Georgetown Law Library, <https://guides.ll.georgetown.edu/freelowcost/low-cost>.

**HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER**



6 [REDACTED]

[REDACTED]
[REDACTED]

6.1 [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

³⁴ [REDACTED] TR-0179867.

³⁵ [REDACTED] ROSS-003386670-ROSS-003386683 at ROSS-003386677-ROSS-003386678.

³⁶ [REDACTED] ROSS-003386670-ROSS-003386683 at ROSS-003386678.

³⁷ Edward Walters, 30(b)(6) Deposition March 1, 2022, p. 84.

³⁸ Casetext develops technology for attorneys who take pride in doing their best work efficiently, Casetext, <https://casetext.com/about/>.

³⁹ Low-Cost Legal Databases, Georgetown Law Library, <https://guides.ll.georgetown.edu/freelowcost/low-cost>.

**HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER**



[REDACTED]

6.1.1 [REDACTED]

[REDACTED]
[REDACTED].

6.1.1.1 [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED] [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED] [REDACTED]
[REDACTED]

⁴⁰ [REDACTED] ROSS-003386670-ROSS-003386683 at ROSS-003386678.

⁴¹ Thomson Reuters Corporation 2021 Annual Report, p. 6.

⁴² Thomson Reuters Corporation 2021 Annual Report, p. 8.

⁴³ Thomson Reuters Corporation 2021 Annual Report, p. 6.

**HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER**



6.1.1.2 [REDACTED]

[REDACTED]

6.1.1.3 [REDACTED]

[REDACTED]

⁴⁴ Thomson Reuters Corporation 2021 Annual Report, p. 6.

⁴⁵ RELX Group 2021 Annual Report, p. 28.

⁴⁶ RELX Group 2021 Annual Report, p. 28.

⁴⁷ RELX Group 2021 Annual Report, p. 28.

⁴⁸ Can Bloomberg Law Compete With Westlaw and LexisNexis, The Wall Street Journal, July 8, 2010, <https://www.wsj.com/articles/BL-LB-31032>.

⁴⁹ Bloomberg Hangs New Shingle, The Wall Street Journal, July 8, 2010, <https://www.wsj.com/articles/SB10001424052748704545004575353143750422612>.

⁵⁰ One subscription, unlimited benefits, Bloomberg Law, <https://pro.bloomberglaw.com/the-complete-legal-research-resource/>.

**HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER**



[REDACTED]

6.1.1.4 [REDACTED]

[REDACTED]

[REDACTED]

6.1.1.5 [REDACTED]

[REDACTED]

⁵¹ About Bloomberg Law, Bloomberg Law, <https://pro.bloomberglaw.com/about-bloomberg-law/>.

⁵² One subscription, unlimited benefits, Bloomberg Law, <https://pro.bloomberglaw.com/the-complete-legal-research-resource/>.

⁵³ Longtime Competitors Fastcase and Casemaker Merge, Reshaping the Legal Research Landscape, Bob Ambrogi, LawSites, January 5, 2021, <https://www.lawnext.com/2021/01/longtime-competitors-fastcase-and-casemaker-merge-reshaping-the-legal-research-landscape.html>; About Fastcase, Fastcase, <https://www.fastcase.com/team/>.

⁵⁴ Low-Cost Legal Databases, Georgetown Law Library, <https://guides.ll.georgetown.edu/freelowcost/low-cost>.

⁵⁵ Welcome to Fastcase, Fastcase, <https://www.fastcase.com/>.

⁵⁶ Low-Cost Legal Databases, Georgetown Law Library, <https://guides.ll.georgetown.edu/freelowcost/low-cost>.

⁵⁷ Longtime Competitors Fastcase and Casemaker Merge, Reshaping the Legal Research Landscape, Bob Ambrogi, LawSites, January 5, 2021, <https://www.lawnext.com/2021/01/longtime-competitors-fastcase-and-casemaker-merge-reshaping-the-legal-research-landscape.html>.

⁵⁸ Longtime Competitors Fastcase and Casemaker Merge, Reshaping the Legal Research Landscape, Bob Ambrogi, LawSites, January 5, 2021, <https://www.lawnext.com/2021/01/longtime-competitors-fastcase-and-casemaker-merge-reshaping-the-legal-research-landscape.html>.

⁵⁹ Longtime Competitors Fastcase and Casemaker Merge, Reshaping the Legal Research Landscape, Bob Ambrogi, LawSites, January 5, 2021, <https://www.lawnext.com/2021/01/longtime-competitors-fastcase-and-casemaker-merge-reshaping-the-legal-research-landscape.html>.

**HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER**



[REDACTED]

6.1.1.6 [REDACTED]

[REDACTED]

6.1.2 [REDACTED]

[REDACTED]

⁶⁰ New Leadership at Legal Research Company Casemaker, Bob Ambrogi, June 5, 2018, LawSites, <https://www.lawnext.com/2018/06/new-leadership-legal-research-company-casemaker.html>.

⁶¹ Longtime Competitors Fastcase and Casemaker Merge, Reshaping the Legal Research Landscape, Bob Ambrogi, LawSites, January 5, 2021, <https://www.lawnext.com/2021/01/longtime-competitors-fastcase-and-casemaker-merge-reshaping-the-legal-research-landscape.html>.

⁶² Cost-Effective Electronic Legal Research: Casemaker, Franklin County Law Library, <https://fclawlib.libguides.com/costeffectivelegalresearch/casemaker>.

⁶³ What is Casemaker?, Lawyerist, <https://lawyerist.com/reviews/online-legal-research-tools/casemaker/>.

⁶⁴ Casetext develops technology for attorneys who take pride in doing their best work efficiently, Casetext, <https://casetext.com/about/>.

⁶⁵ Low-Cost Legal Databases, Georgetown Law Library, <https://guides.ll.georgetown.edu/freelowcost/low-cost>.

⁶⁶ JSTOR Terms and Conditions, <https://about.jstor.org/terms/#content-use>.

⁶⁷ Elsevier Terms and Conditions, <https://www.elsevier.com/legal/elsevier-website-terms-and-conditions>.

**HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER**

**6.1.2.1** [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

6.1.2.2 [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

⁶⁸ I understand that the document entitled, [REDACTED]

[REDACTED] TR-0002844-TR-0002845 [REDACTED].

⁶⁹ [REDACTED]
TR-0002844-TR-0002845 at TR-0002844.

⁷⁰ [REDACTED]
TR-0002844-TR-0002845 at TR-0002844.

⁷¹ [REDACTED]
TR-0002844-TR-0002845 at TR-0002844.

⁷² [REDACTED]
[REDACTED] TR-0002812-TR-0002814 at TR-0002812.

⁷³ Terms and Conditions of use for the LexisNexis Services, Terms and Conditions for use of the Online Services, October 21, 2021, <https://www.lexisnexis.com/en-us/terms/general/default.page>.

⁷⁴ Terms and Conditions of use for the LexisNexis Services, Terms and Conditions for use of the Online Services, October 21, 2021, <https://www.lexisnexis.com/en-us/terms/general/default.page>.

**HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER**



[REDACTED]

[REDACTED]

6.1.2.3 [REDACTED]

[REDACTED]

[REDACTED]

⁷⁵ Terms and Conditions of use for the LexisNexis Services, Terms and Conditions for use of the Online Services, October 21, 2021, <https://www.lexisnexis.com/en-us/terms/general/default.page>.

⁷⁶ Terms and Conditions of use for the LexisNexis Services, Terms and Conditions for use of the Online Services, October 21, 2021, <https://www.lexisnexis.com/en-us/terms/general/default.page>.

⁷⁷ Bloomberg Industry Group Terms of Service: Subscription Products, Updated November 2019, <https://www.bloombergindustry.com/terms-of-service-subscription-products/>.

⁷⁸ Bloomberg Industry Group Terms of Service: Subscription Products, Updated November 2019, <https://www.bloombergindustry.com/terms-of-service-subscription-products/>.

⁷⁹ Bloomberg Industry Group Terms of Service: Subscription Products, Updated November 2019, <https://www.bloombergindustry.com/terms-of-service-subscription-products/>.

⁸⁰ Bloomberg Industry Group Terms of Service: Subscription Products, Updated November 2019, <https://www.bloombergindustry.com/terms-of-service-subscription-products/>.

**HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER**



[REDACTED]

[REDACTED]

6.1.2.4 [REDACTED]

[REDACTED]

6.1.2.5 [REDACTED]

[REDACTED]

⁸¹ Bloomberg Industry Group Terms of Service: Subscription Products, Updated November 2019, <https://www.bloombergindustry.com/terms-of-service-subscription-products/>.

⁸² Bloomberg Industry Group Terms of Service: Subscription Products, Updated November 2019, <https://www.bloombergindustry.com/terms-of-service-subscription-products/>.

⁸³ Fastcase Terms of Service, <https://www.fastcase.com/terms/>.

⁸⁴ Fastcase Terms of Service, <https://www.fastcase.com/terms/>.

⁸⁵ Casetext Terms of Service, Updated July 6, 2022, <https://casetext.com/terms/>.

⁸⁶ Casetext Terms of Service, Updated July 6, 2022, <https://casetext.com/terms/>.

**HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER**



6.1.2.6 [REDACTED]

6.1.3 [REDACTED]

⁸⁷ Casetext Terms of Service, Updated July 6, 2022, <https://casetext.com/terms/>.

⁸⁸ [REDACTED] TR-0001142-TR-0001153 at TR-0001146.

⁸⁹ [REDACTED] TR-0001142-TR-0001153 at TR-0001146.

⁹⁰ [REDACTED] TR-0001142-TR-0001153 at TR-0001146.

⁹¹ [REDACTED] TR-0001142-TR-0001153 at TR-0001146; [REDACTED]

[REDACTED] TR-0001154-TR-0001165 at TR-0001158.

⁹² [REDACTED], FASTCASE_090487-FASTCASE_090490 at FASTCASE_090488; [REDACTED]
[REDACTED] FASTCASE_090429.

⁹³ [REDACTED] CASEMAKER_029770-CASEMAKER_029776 at CASEMAKER_029770 and CASEMAKER_029772.

⁹⁴ Plaintiffs and Counterdefendants Thomson Reuters Enterprise Centre GmbH and West Publishing Corporation's Second Supplemental Responses and Objections to Defendant and Counterclaimant ROSS Intelligence Inc.'s Interrogatory No. 21, June 9, 2022, Response to Interrogatory No. 20 and Second Supplemental Response to Interrogatory No. 21, pp. 15-16, 24; [REDACTED]

[REDACTED] TR-0894151-TR0894157 at TR-0894151; Mark Hoffman, Deposition March 16, 2022, pp. 19-20; [REDACTED]

[REDACTED] TR-0836004, [REDACTED].

**HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER**



[REDACTED]

6.1.3.1 [REDACTED]

[REDACTED]

[REDACTED]

⁹⁵ Editorial Enhancements, <https://legal.thomsonreuters.com/en/products/westlaw/editorial-enhancements>.

⁹⁶ Mark Hoffman, Deposition March 16, 2022, pp. 49-50; Legal Products, <https://legal.thomsonreuters.com/en/products?>.

⁹⁷ [REDACTED]
[REDACTED] ROSS-009547818-ROSS-009547823 at ROSS-009547818.

⁹⁸ Interview of Mark Hoffman.

⁹⁹ Interview of Mark Hoffman.

¹⁰⁰ Interview of Mark Hoffman.

¹⁰¹ Plaintiffs and Counterdefendants Thomson Reuters Enterprise Centre GmbH and West Publishing Corporation's Second Supplemental Responses and Objections to Defendant and Counterclaimant ROSS Intelligence Inc.'s Interrogatory No. 21, June 9, 2022, Response to Interrogatory No. 20 and Second Supplemental Response to Interrogatory No. 21, pp. 15-16, 24; [REDACTED]

[REDACTED] TR-0894151-TR0894157 at TR-0894151; Mark Hoffman, Deposition March 16, 2022, pp. 19-20, 27; [REDACTED]

[REDACTED] TR-0836004, tab [REDACTED]; Schedule 5.0.

**HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER**



[REDACTED]

[REDACTED]

6.1.3.2 [REDACTED]

[REDACTED]

¹⁰² Plaintiffs and Counterdefendants Thomson Reuters Enterprise Centre GmbH and West Publishing Corporation's Second Supplemental Responses and Objections to Defendant and Counterclaimant ROSS Intelligence Inc.'s Interrogatory No. 21, June 9, 2022, Second Supplemental Response to Interrogatory No. 21, p. 24; [REDACTED] TR-0002846-TR-0002847 at TR-0002846; [REDACTED] TR-0836004, tab [REDACTED]; Schedule 5.0.

¹⁰³ Interview of Mark Hoffman. [REDACTED] TR-0894151-TR0894157 at TR-0894151; [REDACTED] TR-0002846-TR-0002847 at TR-0002846.

¹⁰⁴ Interview of Mark Hoffman.

¹⁰⁵ [REDACTED] TR-0836004, tab [REDACTED]

¹⁰⁶ [REDACTED] TR-0836004, tab [REDACTED]

¹⁰⁷ Law Firm Per Search Pricing, LexisNexis, September 1, 2019, <https://www.lexisnexis.com/en-us/terms/21/pricing.page>.

¹⁰⁸ Plaintiffs and Counterdefendants Thomson Reuters Enterprise Centre GmbH and West Publishing Corporation's Second Supplemental Responses and Objections to Defendant and Counterclaimant ROSS Intelligence Inc.'s Interrogatory No. 21, June 9, 2022, Second Supplemental Response to Interrogatory No. 21, p. 24; [REDACTED] TR-0002846-TR-0002847 at TR-0002846; [REDACTED] TR-0836004, tab [REDACTED]; Schedule 5.0.

**HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER**



[REDACTED]

6.1.3.3 [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

¹⁰⁹ Law Firm Per Search Pricing, LexisNexis, September 1, 2019, <https://www.lexisnexis.com/en-us/terms/21/pricing.page>.

¹¹⁰ Edward Walters, 30(b)(6) Deposition March 1, 2022, p. 25.

¹¹¹ [REDACTED]
[REDACTED] FASTCASE_090487-FASTCASE_090490 at FASTCASE_090488; [REDACTED]
[REDACTED] FASTCASE_090429.

¹¹² [REDACTED]
[REDACTED] FASTCASE_090487-FASTCASE_090490 at FASTCASE_090487.

¹¹³ [REDACTED]
FASTCASE_090065-FASTCASE_090068 at FASTCASE_090065.

¹¹⁴ Edward Walters, 30(b)(6) Deposition March 1, 2022, p. 30.

¹¹⁵ [REDACTED]
[REDACTED] FASTCASE_085445-FASTCASE_085448 at FASTCASE_085447.

¹¹⁶ [REDACTED]
[REDACTED] FASTCASE_085445-FASTCASE_085448 at FASTCASE_085447.

**HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER**



[REDACTED]

6.2 [REDACTED]

[REDACTED]

¹¹⁷ New Leadership at Legal Research Company Casemaker, Bob Ambrogi, June 5, 2018, LawSites, <https://www.lawnext.com/2018/06/new-leadership-legal-research-company-casemaker.html>.

¹¹⁸ [REDACTED] CASEMAKER_029770-CASEMAKER_029776 at CASEMAKER_029770 and CASEMAKER_029772.

¹¹⁹ [REDACTED] CASEMAKER_029770-CASEMAKER_029776 at CASEMAKER_029771.

¹²⁰ Khalid Al-Kofahi, Deposition April 8, 2022, p. 19.

¹²¹ [REDACTED] TR-0037669-TR-0037676.

¹²² Legal Analytics and Artificial Intelligence for Research & Law Practice: Tools, Features & Functionality,” p. 2, www.duq.edu/assets/Documents/law/legal-research/_pdf/Baginski,%20Lexis.pdf

¹²³ About Bloomberg Law, Bloomberg Law, <https://pro.bloomberglaw.com/about-bloomberg-law/>.

¹²⁴ Fastcase AI Sandbox, Fastcase, <https://www.fastcase.com/sandbox/>.

¹²⁵ Casemaker Offers Its Members Access to Vincent, AI Tool from vLex, LawSites, March 12, 2019, <https://www.lawnext.com/2019/03/casemaker-offers-its-members-access-to-vincent-ai-tool-from-vlex.html>.

¹²⁶ Casetext develops technology for attorneys who take pride in doing their best work efficiently, Casetext, <https://casetext.com/about/>.

**HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER**



[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

¹³⁸ Khalid Al-Kofahi, Deposition April 8, 2022, p. 22.

¹³⁹ Isabelle Moulinier, 30(b)(6) Deposition July 1, 2022, pp. 12-13.

¹⁴⁰ Isabelle Moulinier, 30(b)(6) Deposition July 1, 2022, pp. 13-14.

¹⁴¹ Major Thomson Reuters Launch: Westlaw Edge, West Search Plus, Analytics, Enhances Citator and More, Jean O'Grady, July 12, 2018, Dewey B Strategic, <https://www.deweybstrategic.com/2018/07/6838.html>.

¹⁴² [REDACTED] TR-0037669-TR-0037676 at TR-0037674.

¹⁴³ Khalid Al-Kofahi, Deposition April 8, 2022, p. 60.

¹⁴⁴ Isabelle Moulinier, 30(b)(6) Deposition July 1, 2022, p. 143; Opening Expert Report of Dr. Jonathan L. Krein, August 1, 2022, pp. 36-37.

¹⁴⁵ Isabelle Moulinier, 30(b)(6) Deposition July 1, 2022, pp. 77-78.

**HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER**

6.4

[illegible]

¹⁴⁶ Andrew Arruda, Deposition March 30, 2022, p. 45.

¹⁴⁷ Jimoh Ovbiagele, 30(b)(6) Deposition April 12, 2022, pp. 36-37.

¹⁴⁸ Andrew Arruda, Deposition March 30, 2022, pp. 11-12.

¹⁴⁹ Andrew Arruda, Deposition March 30, 2022, p. 59.

¹⁵⁰ Andrew Arruda, Deposition March 30, 2022, pp. 58-60.

¹⁵¹ Andrew Arruda, Deposition March 30, 2022, pp. 58-60.

¹⁵² Andrew Arruda, Deposition March 30, 2022, p. 28.

¹⁵³ Andrew Arruda, Deposition March 30, 2022, p. 63.

¹⁵⁴ Defendant and Counterclaimant ROSS Intelligence Inc.'s Supplemental Responses and Objections to Plaintiffs' Set of Interrogatories (Supplemental Response to Interrogatory No. 11 Only), February 22, 2022, Supplemental Answer to Interrogatory No. 2, p. 10.

¹⁵⁵ Defendant and Counterclaimant ROSS Intelligence Inc.'s Supplemental Responses and Objections to Plaintiffs' Set of Interrogatories (Supplemental Response to Interrogatory No. 11 Only), February 22, 2022, Supplemental Answer to Interrogatory No. 2, p. 10.

¹⁵⁶ Andrew Arruda, Deposition March 30, 2022, pp. 66, 69.

HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER

INTELLECTUAL CAPITAL EQUITY

[illegible]

¹⁵⁷ Andrew Arruda, Deposition March 30, 2022, pp. 68-69.

¹⁵⁸ Jimoh Ovbiagele, 30(b)(6) Deposition April 12, 2022, pp. 207-208; [REDACTED]
[REDACTED] ROSS-009585472.

¹⁵⁹ Andrew Arruda, Deposition March 30, 2022, p. 70.

160 [REDACTED]
[REDACTED] ROSS-003334354.

161 [REDACTED]
[REDACTED] ROSS-003334354.

162 ROSS-003610162-ROSS-003610165 at ROSS-003610164.

163 [REDACTED] ROSS-003610162-ROSS-003610165 at ROSS-003610163.

164 [REDACTED] ROSS-003610162-ROSS-003610165 at ROSS-003610162.

165 [REDACTED]
[REDACTED]
[REDACTED] ROSS-003277880-ROSS-003277881 at
ROSS-003277880.

HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER



[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

¹⁶⁶ [REDACTED] ROSS-003277880-ROSS-003277881 at ROSS-003277881.

¹⁶⁷ [REDACTED] 'TR-0038909-TR-0038920 at 'TR-0038910.

¹⁶⁸ [REDACTED] 'TR-0038921-TR-0038922.

¹⁶⁹ Defendant and Counterclaimant ROSS Intelligence Inc.'s Supplemental Responses and Objections to Plaintiffs' Set of Interrogatories (Supplemental Response to Interrogatory No. 11 Only), February 22, 2022, Supplemental Answer to Interrogatory No. 2, p. 12.

¹⁷⁰ [REDACTED] CASEMAKER_029770-CASEMAKER_029776.

¹⁷¹ Andrew Arruda, Deposition March 30, 2022, pp. 83-84.

¹⁷² Andrew Arruda, Deposition March 30, 2022, pp. 83-84.

¹⁷³ Andrew Arruda, Deposition March 30, 2022, pp. 275, 277.

¹⁷⁴ [REDACTED] ROSS-003487472-ROSS-003487474 at ROSS-003487473.

**HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER**



[REDACTED]

[REDACTED]

- [REDACTED]
- [REDACTED]
- [REDACTED]

186 [REDACTED] ROSS-000176759-ROSS-000176767 at ROSS-000176761.

187 [REDACTED] ROSS-000176759-ROSS-000176767 at ROSS-000176766.

188 [REDACTED]
[REDACTED] ROSS-000304769-ROSS-000304784 at ROSS-000304771-ROSS-000304774.

189 [REDACTED]
[REDACTED] ROSS-000304769-ROSS-000304784 at ROSS-000304771-ROSS-000304772.

190 [REDACTED]
[REDACTED] ROSS-000304769-ROSS-000304784 at ROSS-000304771.

191 [REDACTED]
[REDACTED] ROSS-000304769-ROSS-000304784 at ROSS-000304771-ROSS-000304772.

192 [REDACTED] ROSS-000175054-ROSS-000175067 at ROSS-000175056.

**HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER**



[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

¹⁹³ Sean Shafik, 30(b)(6) Deposition April 22, 2022, p. 122, Exhibit 14: [REDACTED]

[REDACTED] ROSS-003382388.

¹⁹⁴ [REDACTED]
[REDACTED] TR-0039933-TR-0039942.

¹⁹⁵ Tariq Hafeez, 30(b)(6) Deposition May 26, 2022, p. 238.

¹⁹⁶ [REDACTED]
[REDACTED] R-LEGALEASE-00048772-R-LEGALEASE-00048776 at R-LEGALEASE-00048772.

¹⁹⁷ [REDACTED]
[REDACTED] R-LEGALEASE-00048772-R-LEGALEASE-00048776 at R-LEGALEASE-00048773.

¹⁹⁸ [REDACTED]
[REDACTED] R-LEGALEASE-00048772-R-LEGALEASE-00048776 at R-LEGALEASE-00048773-R-LEGALEASE-00048774.

¹⁹⁹ [REDACTED]
[REDACTED] R-LEGALEASE-00048772-R-LEGALEASE-00048776 at R-LEGALEASE-00048775.

²⁰⁰ Tariq Hafeez, 30(b)(6) Deposition May 26, 2022, pp. 284-285; [REDACTED]
[REDACTED] R-LEGALEASE-00048728-R-LEGALEASE-00048737 at R-LEGALEASE-00048735-R-LEGALEASE-00048736.

²⁰¹ [REDACTED]
[REDACTED] R-LEGALEASE-00048728-R-LEGALEASE-00048737 at R-LEGALEASE-00048736.

²⁰² Defendant and Counterclaimant ROSS Intelligence Inc.'s Supplemental Responses and Objections to Plaintiffs' Set of Interrogatories (Supplemental Response to Interrogatory No. 11 Only), February 22, 2022, Supplemental Answer to Interrogatory No. 11, p. 63.

**HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER**



[REDACTED]

[REDACTED]

6.5

[REDACTED]

[REDACTED]

²⁰³ Jimoh Ovbiagele, 30(b)(6) Deposition April 12, 2022, pp. 184-185.

²⁰⁴ Jimoh Ovbiagele, 30(b)(6) Deposition April 12, 2022, pp. 186-187.

²⁰⁵ [REDACTED] ROSS-009722263-ROSS-009722299 at ROSS-009722264.

²⁰⁶ [REDACTED] TR-0037669-TR-0037676 at TR-0037674-TR-0037675.

²⁰⁷ Khalid Al-Kofahi, Deposition April 8, 2022, p. 24.

²⁰⁸ Isabelle Moulinier, 30(b)(6) Deposition July 1, 2022, p. 143; Opening Expert Report of Dr. Jonathan L. Krein, August 1, 2022, p. 37.

²⁰⁹ Defendant and Counterclaimant ROSS Intelligence Inc.'s Supplemental Responses and Objections to Plaintiffs' Set of Interrogatories (Supplemental Response to Interrogatory No. 11 Only), February 22, 2022, Supplemental Answer to Interrogatory No. 11, p. 63.

²¹⁰ Jimoh Ovbiagele, 30(b)(6) Deposition April 12, 2022, pp. 186-187.

²¹¹ [REDACTED]
[REDACTED] ROSS-003610162-ROSS-003610165 at ROSS-003610163.

²¹² [REDACTED]
[REDACTED], ROSS-003610162-ROSS-003610165 at ROSS-003610162.

**HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER**

215 [REDACTED]
[REDACTED] R-LEGALEASE-00048728-R-LEGALEASE-00048737 at R-LEGALEASE-00048735.



7 [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

■ [REDACTED]
[REDACTED]

■ [REDACTED]

■ [REDACTED]
[REDACTED]

■ [REDACTED]
[REDACTED]

■ [REDACTED]
[REDACTED]

■ [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

■ [REDACTED]

■ [REDACTED]

²¹⁶ Andrew Martens, 30(b)(6) Deposition March 25, 2022, pp. 145-147; [REDACTED]
[REDACTED] TR-0359503-TR-0359560
at TR-0359503-TR-0359504 and TR-0359509-TR-0359542.

²¹⁷ Khalid Al-Kofahi, Deposition April 8, 2022, p. 19.

²¹⁸ [REDACTED]
[REDACTED] TR-0002758-TR-0002768 at TR-0002758-TR-0002760.

²¹⁹ Khalid Al-Kofahi, Deposition April 8, 2022, pp. 16-17.

²²⁰ Andrew Martens, 30(b)(6) Deposition March 25, 2022, pp. 151-152; [REDACTED] TR-
[REDACTED] TR-
0359401-TR-0359443 at TR-0359401-TR-0359403 and TR-0359410-TR-0359441.

²²¹ Andrew Martens, 30(b)(6) Deposition March 25, 2022, pp. 153-155; [REDACTED]

[REDACTED]
2014, TR-0358927-TR-0358948.

²²² Andrew Arruda, Deposition March 30, 2022, pp. 11-12, 37-38.

²²³ Andrew Martens, 30(b)(6) Deposition March 25, 2022, p. 156; [REDACTED] TR-
[REDACTED] TR-
0359181-TR-0359186; [REDACTED]
[REDACTED] TR-0359202-TR-0359204.

**HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER**



- [REDACTED]
- [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
- [REDACTED]
- [REDACTED]
[REDACTED]
- [REDACTED]
[REDACTED]
- [REDACTED]
[REDACTED]
- [REDACTED]
[REDACTED]
- [REDACTED]
[REDACTED]
[REDACTED]
- [REDACTED]
[REDACTED]
- [REDACTED]
[REDACTED]
[REDACTED]

224 [REDACTED]
[REDACTED] TR-0038909-TR-0038920.

225 [REDACTED] TR-
0038921-TR-0038922.

226 Tariq Hafeez, 30(b)(6) Deposition May 26, 2022, p. 78.

227 Tariq Hafeez, 30(b)(6) Deposition May 26, 2022, p. 79.

228 [REDACTED]
[REDACTED] TR-0039933-TR-0039942.

229 [REDACTED]
[REDACTED] ROSS-000304769-ROSS-000304784 at ROSS-000304771-ROSS-
000304774.

230 [REDACTED]
CASEMAKER_029770-CASEMAKER_029776.

231 [REDACTED]
[REDACTED] R-LEGALEASE-00048772-R-LEGALEASE-00048776.

232 [REDACTED]
[REDACTED] R-LEGALEASE-00048728-R-LEGALEASE-00048737.

**HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER**



- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]

²³³ [REDACTED] LEGALEASE-00108391.
²³⁴ Andrew Martens, 30(b)(6) Deposition March 25, 2022, pp. 153-155, 201-203; [REDACTED]
 [REDACTED] TR-0358967-TR-0358988 at TR-0358967, TR-0358969-TR-0358970,
 TR-0358986-TR-0358987.

²³⁵ [REDACTED]
 [REDACTED] ROSS-000247119-ROSS-000247120.

²³⁶ [REDACTED] ROSS-000241438-ROSS-000241439.
²³⁷ Andrew Martens, 30(b)(6) Deposition March 25, 2022, pp. 157-159; [REDACTED]
 [REDACTED] TR-0359959-TR-0360216 at TR-0359962-TR-0359968; [REDACTED]

[REDACTED] TR-0359564-TR-0359954.

²³⁸ Complaint, May 6, 2020.

²³⁹ [REDACTED] TR-0037677-TR-0037680 at TR-0037677.

²⁴⁰ [REDACTED] TR-0037677-TR-0037680 at TR-0037677.

**HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
 SUBJECT TO PROTECTIVE ORDER**

[REDACTED]

[REDACTED]
 [REDACTED]
 [REDACTED]
 [REDACTED]

²⁴⁹ Complaint, May 6, 2020, pp. 11-12.

Page 39



[REDACTED]

²⁵⁰ Complaint, May 6, 2020, pp. 11-14.

**HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER**

INTELLECTUAL CAPITAL EQUITY

9

[REDACTED]
 [REDACTED]

[REDACTED]

[REDACTED]

■ [REDACTED]
 [REDACTED]
 [REDACTED]
 [REDACTED]

²⁵¹ 17 U.S.C. § 504.



[REDACTED]

**HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER**



10 [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

²⁵² Complaint, May 6, 2020, p. 15.

²⁵³ [REDACTED]

[REDACTED]

ROSS-003389728-ROSS-0003389730 at ROSS-003389728.

²⁵⁴ [REDACTED]

[REDACTED] ROSS-023018233-ROSS-023018236 at ROSS-023018235.

²⁵⁵ Andrew Arruda, Deposition March 30, 2022, p. 271.

²⁵⁶ [REDACTED]

[REDACTED]

[REDACTED] ROSS-000203449-ROSS-000203467 at ROSS-000203466.

²⁵⁷ [REDACTED]

[REDACTED]

[REDACTED] ROSS-000203449-ROSS-000203467 at ROSS-000203449.

²⁵⁸ [REDACTED]

[REDACTED] TR-0038909-TR-0038920.

²⁵⁹ Tariq Hafeez, 30(b)(6) Deposition May 26, 2022, pp. 78-79.

HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER



[REDACTED]

[REDACTED]

10.1

[REDACTED]

²⁶⁰ [REDACTED]

[REDACTED] ROSS-000204366-ROSS-000204367 at ROSS-000204366.

²⁶¹ Tariq Hafeez, 30(b)(6) Deposition May 26, 2022, pp. 172-174.

²⁶² Complaint, May 6, 2020, p. 15.

²⁶³ Complaint, May 6, 2020, p. 15.

²⁶⁴ Restatement (Second) of Torts § 766.

²⁶⁵ *Great Am. Opportunities, Inc. v. Cherrydale Fundraising, LLC*, No. 3718-VCP, 2010 WL 338219, at * 27 (Del. Ch. Jan. 29, 2010).

²⁶⁶ Restatement (Second) of Torts § 766.

**HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER**



11 [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]

11.1 [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

²⁶⁷ Opening Expert Report of Dr. Jonathan Krein, August 1, 2022.

²⁶⁸ To be clear, I am not opining whether or not there is a market for legal research technology apart from legal information. ROSS used both a collection of legal information and search technology (with training data including the Bulk Memo created using Westlaw Content) to create its own legal research platform.

²⁶⁹ Opening Expert Report of Dr. Jonathan Krein, August 1, 2022, pp. 3, 78-88.

**HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER**



[REDACTED]

[REDACTED]

[REDACTED]

²⁷⁰ Huge “foundation models” are turbo-charging AI progress,” The Economist, June 11, 2022, [https://www.economist.com/interactive/briefing/2022/06/11/huge-foundation-models-are-turbo-charging - AI-progress](https://www.economist.com/interactive/briefing/2022/06/11/huge-foundation-models-are-turbo-charging-AI-progress).

²⁷¹ Huge “foundation models” are turbo-charging AI progress,” The Economist, June 11, 2022, [https://www.economist.com/interactive/briefing/2022/06/11/huge-foundation-models-are-turbo-charging - AI-progress](https://www.economist.com/interactive/briefing/2022/06/11/huge-foundation-models-are-turbo-charging-AI-progress).

²⁷² Huge “foundation models” are turbo-charging AI progress,” The Economist, June 11, 2022, [https://www.economist.com/interactive/briefing/2022/06/11/huge-foundation-models-are-turbo-charging - AI-progress](https://www.economist.com/interactive/briefing/2022/06/11/huge-foundation-models-are-turbo-charging-AI-progress).

²⁷³ The world’s most valuable resource is no longer oil, but data, The Economist, May 6, 2017, <https://www.economist.com/leaders/2017/05/06/the-worlds-most-valuable-resource-is-no-longer-oil-but-data>.

²⁷⁴ The world’s most valuable resource is no longer oil, but data, The Economist, May 6, 2017, <https://www.economist.com/leaders/2017/05/06/the-worlds-most-valuable-resource-is-no-longer-oil-but-data>.

²⁷⁵ Data Privacy Day at Apple: Improving transparency and empowering users, Apple, January 27, 2021, <https://www.apple.com/newsroom/2021/01/data-privacy-day-at-apple-improving-transparency-and-empowering-users/>.

²⁷⁶ Buy Clean Datasets For Machine Learning, DataStock, <https://datastock.shop/buy-clean-datasets/>.

²⁷⁷ Opening Expert Report of Dr. Jonathan Krein, August 1, 2022, pp. 78-79; “Getty Images Launches Industry-First Model Release Supporting Data Privacy in Artificial Intelligence and Machine Learning,” March 22, 2022, <http://press.gettyimages.com/getty-images-launches-industry-first-model-release-supporting-data-privacy-in-artificial-intelligence-and-machine-learning/>.

²⁷⁸ Opening Expert Report of Dr. Jonathan Krein, August 1, 2022, pp. 79-80; Defined.AI Home Page, <https://www.defined.ai/>.

**HIGHLY CONFIDENTIAL - ATTORNEYS’ EYES ONLY
SUBJECT TO PROTECTIVE ORDER**

INTELLECTUAL CAPITAL EQUITY

[illegible]

279 Opening Expert Report of Dr. Jonathan Krein, August 1, 2022, pp. 82-83; “Data Science and Analytics,” https://www.lexisnexis.com/en-us/professional/connect/daas/data-science.page?utm_source=google&utm_medium=cpc&utm_term=machine%20learning%20data&utm_campaign=BR-M-NEX-US-DAAS-PPC-BMM-2020&utm_content=&gclid=Cj0KCQjw2_OWbDqARIsAAUNTTFfpb40XXJNBLhBRC-Kq4Roa3KpOH91Bz8LvUeGwNmE0FfW2hftZ8aApbzEALw_wcB.

²⁸⁰ Categorize your data set for optimal search results with our superior taxonomy offering, LexisNexis, <https://internationalsales.lexisnexis.com/partners/taxonomy>.

281 [REDACTED] TR-0037669-TR-0037676.

²⁸² Khalid Al-Kofahi, Deposition April 8, 2022, p. 19.

²⁸³ Isabelle Moulinier, 30(b)(6) Deposition July 1, 2022, p. 143.

²⁸⁴ Isabelle Moulinier, 30(b)(6) Deposition July 1, 2022, p. 104.

²⁸⁵ Opening Expert Report of Dr. Jonathan Krein, August 1, 2022, p. 75.

HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER



[REDACTED]

[REDACTED]

[REDACTED]

²⁸⁶ Comparing 3 Legal Research Software Products, Capterra, Casetext vs Fastcase vs Lexis, <https://www.capterra.com/legal-research-software/compare/196820-168929-196819/CARA-vs-Fastcase-vs-Lexis-Advance>.

²⁸⁷ How Bloomberg Law (BLAW) Uses AI and Machine Learning to Prove its Case, Bloomberg, June 7, 2019, <https://www.bloomberg.com/company/stories/bloomberg-law-blaw-uses-ai-machine-learning-prove-case/>.

²⁸⁸ Comparing 3 Legal Research Software Products, Capterra, Casetext vs Fastcase vs Lexis, <https://www.capterra.com/legal-research-software/compare/196820-168929-196819/CARA-vs-Fastcase-vs-Lexis-Advance>.

²⁸⁹ Casemaker Offers Its Members Access to Vincent, AI Tool from vLex, LawSites, March 12, 2019, <https://www.lawnext.com/2019/03/casemaker-offers-its-members-access-to-vincent-ai-tool-from-vlex.html>.

²⁹⁰ Comparing 3 Legal Research Software Products, Capterra, Casetext vs Fastcase vs Lexis, <https://www.capterra.com/legal-research-software/compare/196820-168929-196819/CARA-vs-Fastcase-vs-Lexis-Advance>.

²⁹¹ Declaration of Andrew Arruda, *West Publishing Corporation v. LegalEase Solutions, LLC*, Case No. 0:18-cv-01445, October 1, 2019, p. 1.

²⁹² Sean Shafik, 30(b)(6) Deposition April 22, 2022, p. 122, [REDACTED] ROSS-003382388.

²⁹³ Jimoh Ovbiagele, 30(b)(6) Deposition April 12, 2022, pp. 167-168.

²⁹⁴ [REDACTED] ROSS-003386670-ROSS-003386683 at ROSS-003386678.

**HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER**



[REDACTED]

11.2 [REDACTED]

[REDACTED]

11.2.1 [REDACTED]

[REDACTED]

²⁹⁵ [REDACTED]

ROSS-003389728-ROSS-0003389730 at ROSS-003389728.

²⁹⁶ Tomas van der Heijden, 30(b)(6) Deposition March 17, 2022, p. 157.

²⁹⁷ Andrew Arruda, Deposition March 30, 2022, pp. 39, 103, 114; [REDACTED] ROSS-003705907-ROSS-003705908 at ROSS-003705907; Declaration of Andrew Arruda, *West Publishing Corporation v. LegalEase Solutions, LLC*, Case No. 0:18-cv-01445, October 1, 2019, p. 2; Tomas van der Heijden, 30(b)(6) Deposition March 17, 2022, p. 55.

**HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER**

INTELLECTUAL CAPITAL EQUITY

[illegible]

298- [REDACTED]
[REDACTED] TR-0038909-TR-0038920; [REDACTED]
[REDACTED]
[REDACTED] ROSS-
000304769-ROSS-000304784 at ROSS-000304771-ROSS-000304774.
299 Tariq Hafeez, 30(b)(6) Deposition May 26, 2022, pp. 78-79.
300 Jimoh Ovbiagele, 30(b)(6) Deposition April 12, 2022, pp. 186-188.
301 Tariq Hafeez, 30(b)(6) Deposition May 26, 2022, pp. 78-79; [REDACTED]
[REDACTED] TR-0002723; [REDACTED]
[REDACTED]
[REDACTED] R-LEGALEASE-00101636-R-LEGALEASE-00101642 at
R-LEGALEASE-00101637; Jimoh Ovbiagele, 30(b)(6) Deposition April 12, 2022, pp. 181-183, 186.
302 Plaintiffs and Counterdefendants Thomson Reuters Enterprise Centre GmbH and West Publishing
Corporation's Second Supplemental Responses and Objections to Defendant and Counterclaimant ROSS
Intelligence Inc.'s Interrogatory No. 1, March 23, 2022.
303 Mark Hoffman, Deposition March 16, 2022, pp. 20, 101.
304 Plaintiffs and Counterdefendants Thomson Reuters Enterprise Centre GmbH and West Publishing
Corporation's Second Supplemental Responses and Objections to Defendant and Counterclaimant ROSS
Intelligence Inc.'s Interrogatory No. 21, June 9, 2022, Response to Interrogatory No. 20 and Second
Supplemental Response to Interrogatory No. 21, pp. 15-16, 24; [REDACTED]
[REDACTED] TR-0894151-TR0894157 at TR-0894151; Mark
Hoffman, Deposition March 16, 2022, pp. 19-20, 27; [REDACTED]
[REDACTED] TR-0836004, [REDACTED]; Schedule 5.0.

HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER



[REDACTED]

[REDACTED]

11.2.1.1 [REDACTED]

[REDACTED]

³⁰⁵ Plaintiffs and Counterdefendants Thomson Reuters Enterprise Centre GmbH and West Publishing Corporation's Second Supplemental Responses and Objections to Defendant and Counterclaimant ROSS Intelligence Inc.'s Interrogatory No. 21, June 9, 2022, Second Supplemental Response to Interrogatory No. 21, p. 24; [REDACTED] TR-0002846-TR-0002847 at TR-0002846; [REDACTED] TR-0836004, [REDACTED]; Schedule 5.0.

³⁰⁶ [REDACTED] TR-0836004, [REDACTED]

³⁰⁷ Tariq Hafeez, 30(b)(6) Deposition May 26, 2022, pp. 78-79.

³⁰⁸ [REDACTED] R-LEGALEASE-00101636-
R-LEGALEASE-00101642 at R-LEGALEASE-00101641.

³⁰⁹ [REDACTED] R-LEGALEASE-00101636-
R-LEGALEASE-00101642 at R-LEGALEASE-00101640.

³¹⁰ [REDACTED] R-LEGALEASE-00101636-
R-LEGALEASE-00101642 at R-LEGALEASE-00101637.

³¹¹ [REDACTED] R-LEGALEASE-00101636-
R-LEGALEASE-00101642 at R-LEGALEASE-00101637.

³¹² [REDACTED] TR-0836004, [REDACTED]

³¹³ Interview of Mark Hoffman.

**HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER**



[REDACTED]

[REDACTED]

[REDACTED]

11.2.1.2 [REDACTED]

[REDACTED]

³¹⁴ Schedule 1.0.

³¹⁵ Schedule 2.0.

³¹⁶ Plaintiffs and Counterdefendants Thomson Reuters Enterprise Centre GmbH and West Publishing Corporation's Second Supplemental Responses and Objections to Defendant and Counterclaimant ROSS Intelligence Inc.'s Interrogatory No. 21, June 9, 2022, Second Supplemental Response to Interrogatory No. 21, p. 24; [REDACTED] TR-0002846-TR-0002847 at TR-0002846; [REDACTED]

[REDACTED] TR-0836004, tab [REDACTED]; Schedule 5.0.

³¹⁷ Schedule 5.0.

³¹⁸ Schedule 2.0.

³¹⁹ Schedule 1.0.

³²⁰ Schedule 1.0.

**HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER**



[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

³²¹ Schedule 3.1.

³²² Schedule 3.1.

³²³ Schedule 3.1.

³²⁴ Schedule 3.1.

³²⁵ Schedule 3.1.

³²⁶ Schedule 3.0.

³²⁷ Interview of Mark Hoffman.

³²⁸ Schedule 3.1.

**HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER**



[REDACTED]

[REDACTED]

[REDACTED]

11.2.2 [REDACTED]

[REDACTED]

³²⁹ Schedule 3.3.

³³⁰ [REDACTED];

Schedule 5.0.

³³¹ Schedule 3.3.

³³² Schedule 3.3.

³³³ Schedule 3.2.

³³⁴ Schedule 1.1.

**HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER**



[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

³⁴⁴ Schedule 2.1.

³⁴⁵ Schedule 1.0.

³⁴⁶ Schedule 3.0.

³⁴⁷ [REDACTED] TR-0836004.

³⁴⁸ [REDACTED];

Schedule 5.0.

³⁴⁹ Interview of Mark Hoffman.

**HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER**



[REDACTED]

11.2.3 [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

³⁵⁰ Schedule 3.2.

³⁵¹ Schedule 1.0.

³⁵² Schedule 1.1.

³⁵³ Restatement (Second) of Torts § 766.

**HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER**



12 [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

12.1 [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]
[REDACTED]

³⁵⁴ 17 U.S.C. § 504.

³⁵⁵ *Great Am. Opportunities, Inc. v. Cherrydale Fundraising, LLC*, No. 3718-VCP, 2010 WL 338219, at * 27 (Del. Ch. Jan. 29, 2010).

³⁵⁶ [REDACTED]
[REDACTED] ROSS-009720945; [REDACTED]
[REDACTED] ROSS-009664862; [REDACTED]
[REDACTED], ROSS-009690394; [REDACTED]
[REDACTED] ROSS-009721062.

³⁵⁷ [REDACTED] TR-0037677-TR-0037680 at TR-0037677.

³⁵⁸ [REDACTED] ROSS-009722263-ROSS-009722299 at ROSS-009722264.

³⁵⁹ Schedule 6.0.

**HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER**

13

[illegible]

³⁶⁰ Defendant and Counterclaimant ROSS Intelligence Inc.'s Supplemental Responses and Objections to Plaintiffs' Set of Interrogatories (Supplemental Response to Interrogatory No. 11 Only), February 22, 2022, Supplemental Answer to Interrogatory No. 11, p. 63.

³⁶¹ Tomas van der Heijden, 30(b)(6) Deposition March 17, 2022, p. 324.

³⁶² Tariq Hafeez, 30(b)(6) Deposition May 26, 2022, p. 238.

³⁶³ Plaintiffs and Counterdefendants Thomson Reuters Enterprise Centre GmbH and West Publishing Corporation's Second Supplemental Responses and Objections to Defendant and Counterclaimant ROSS Intelligence Inc.'s Interrogatory No. 21, June 9, 2022, First Supplemental Response to Interrogatory No. 21, p. 22.

364 Schedule 1.2

365 Plaintiffs and Counterdefendants Thomson Reuters Enterprise Centre GmbH and West Publishing
Corporation's Second Supplemental Responses and Objections to Defendant and Counterclaimant ROSS
Intelligence Inc.'s Interrogatory No. 21, June 9, 2022, First Supplemental Response to Interrogatory No. 21, p.
22

³⁶⁶ Opening Expert Report of Dr. Jonathan L. Krein, August 1, 2022, Appendix C.

HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER



[REDACTED]

³⁶⁷ Schedule 4.0.

³⁶⁸ Schedule 4.0.

**HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER**



14 [REDACTED]

[REDACTED]

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'James E. Malackowski', written over a horizontal line.

James E. Malackowski

August 1, 2022

Date

**HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER**

EXHIBIT AY



OCEAN TOMO®

A PART OF  **JS|HELD**

THOMSON REUTERS ENTERPRISE CENTRE GMBH AND WEST PUBLISHING CORPORATION

v.

ROSS INTELLIGENCE INC.

**UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

Civil Action No. 1:20-cv-00613-SB

REBUTTAL EXPERT REPORT OF JAMES E. MALACKOWSKI

September 6, 2022

**HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER**

[REDACTED]

[REDACTED]

[illegible]

[REDACTED]

⁴ 17 U.S.C. § 107.

Page 1



2 [REDACTED]

[REDACTED]

[REDACTED]

2.1 [REDACTED]

[REDACTED]

2.1.1 [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

⁵ Expert Report of Alan J. Cox, Ph.D., August 1, 2022, p. 19.



2.1.2

[REDACTED]

[REDACTED]

2.1.3

[REDACTED]

2.1.4

[REDACTED]

[REDACTED]

HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER



2.2

[REDACTED]

**HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER**



3 [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

(1) [REDACTED]

(2) [REDACTED];

(3) [REDACTED]

(4) [REDACTED].

[REDACTED]

[REDACTED]

⁶ 17 U.S.C. § 107.

⁷ *Campbell v. Acuff-Rose Music, Inc.*, 510 U.S. 569, 590 (1994); *Cable/Home Communication Corp. v. Network Productions, Inc.*, 902 F.2d 829, 844 (11th Cir. 1990).

⁸ *Am. Geophysical Union v. Texaco Inc.*, 60 F.3d 913, 929 (2d Cir. 1994).

⁹ *Am. Geophysical Union v. Texaco Inc.*, 60 F.3d 913, 930 (2d Cir. 1994).

**HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER**



12

¹⁰ Sony Corp. of Am. v. Universal City Studios, Inc., 464 U.S. 417, 450-51 (1984); Worldwide Church of God v. Phila. Church of God, Inc., 227 F.3d 1110, 1119 (9th Cir. 2000); Ringgold v. Black Ent. Television, Inc., 126 F.3d 70, 81 (2d Cir. 1997); Castle Rock Ent., Inc. v. Carol Publ'g Grp., Inc., 150 F.3d 132, 136, 145-46 (2d Cir. 1998).

¹¹ *Monge v. Maya Magazines, Inc.*, 688 F.3d 1164 (9th Cir. 2012).

¹² *Kelly v. Arriba Soft Corp.*, 336 F.3d 811, 821 (9th Cir. 2002).

**HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER**



4 [REDACTED]

[REDACTED]

[REDACTED]

■ [REDACTED]

■ [REDACTED]

■ [REDACTED]

■ [REDACTED]

¹³ The Rebuttal Report refers to the memos that LegalEase prepared in the Bulk Memo Project for ROSS as Bulk Memos, consistent with the Malackowski Report.

¹⁴ Expert Report of Alan J. Cox, Ph.D., August 1, 2022, p. 19.

¹⁵ Expert Report of Alan J. Cox, Ph.D., August 1, 2022, p. 19.

¹⁶ Rebuttal Schedule 1.0.

¹⁷ Expert Report of Alan J. Cox, Ph.D., August 1, 2022, p. 5.

¹⁸ Expert Report of Alan J. Cox, Ph.D., August 1, 2022, p. 36.

¹⁹ Expert Report of Alan J. Cox, Ph.D., August 1, 2022, p. 5.

²⁰ Expert Report of Alan J. Cox, Ph.D., August 1, 2022, p. 6.

²¹ Expert Report of Alan J. Cox, Ph.D., August 1, 2022, p. 8.

²² Expert Report of James E. Malackowski, August 1, 2022, pp. 34-35, 39.

**HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER**

INTELLECTUAL CAPITAL EQUITY

[illegible]

²³ Expert Report of Alan J. Cox, Ph.D., August 1, 2022, p. 7.

²⁴ Expert Report of Alan J. Cox, Ph.D., August 1, 2022, p. 7.

²⁵ Expert Report of Alan J. Cox, Ph.D., August 1, 2022, p. 8.

HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER



5 [REDACTED]

[REDACTED]

[REDACTED]

5.1 [REDACTED]

[REDACTED]

²⁶ Expert Report of Alan J. Cox, Ph.D., August 1, 2022, p. 5.

²⁷ Expert Report of Alan J. Cox, Ph.D., August 1, 2022, p. 5.

²⁸ Opening Expert Report of Dr. Jonathan L. Krein, August 1, 2022, p. 37.

²⁹ Defendant and Counterclaimant ROSS Intelligence Inc.'s Supplemental Responses and Objections to Plaintiffs' Set of Interrogatories (Supplemental Response to Interrogatory No. 11 Only), February 22, 2022, Supplemental Answer to Interrogatory No. 2, pp. 10-12.

³⁰ [REDACTED]

[REDACTED] ROSS-003277880-ROSS-003277881 at ROSS-003277881.

**HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER**



[REDACTED]

[REDACTED]

[REDACTED]

³¹ Defendant and Counterclaimant ROSS Intelligence Inc.'s Supplemental Responses and Objections to Plaintiffs' Set of Interrogatories (Supplemental Response to Interrogatory No. 11 Only), February 22, 2022, Supplemental Answer to Interrogatory No. 2, p. 12.

³² Defendant and Counterclaimant ROSS Intelligence Inc.'s Supplemental Responses and Objections to Plaintiffs' Set of Interrogatories (Supplemental Response to Interrogatory No. 11 Only), February 22, 2022, Supplemental Answer to Interrogatory No. 2, pp. 12-13; Andrew Arruda, Deposition March 30, 2022, pp. 275, 277.

³³ Expert Report of James E. Malackowski, August 1, 2022, pp. 30-34.

³⁴ Opening Expert Report of Dr. Jonathan L. Krein, August 1, 2022, pp. 46-61.

³⁵ [REDACTED]
ROSS-000197671-ROSS-000197673 at ROSS-000197672.

³⁶ [REDACTED]
ROSS-000197671-ROSS-000197673 at ROSS-000197672.

³⁷ Tomas van der Heijden, 30(b)(6) Deposition March 17, 2022, pp. 325-326.

³⁸ Tomas van der Heijden, 30(b)(6) Deposition March 17, 2022, p. 327.

³⁹ Tariq Hafeez, 30(b)(6) Deposition May 26, 2022, pp. 78-79;

TR-0002723;

[REDACTED]
R-LEGALEASE-00101636-R-LEGALEASE-00101642 at
R-LEGALEASE-00101637; Jimoh Ovbiagele, 30(b)(6) Deposition April 12, 2022, pp. 181-183, 186.

⁴⁰ Tariq Hafeez, 30(b)(6) Deposition May 26, 2022, p. 80.

**HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER**



[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

⁴¹ Tariq Hafeez, 30(b)(6) Deposition May 26, 2022, p. 79.

⁴² Tariq Hafeez, 30(b)(6) Deposition May 26, 2022, p. 78.

⁴³ Christopher Cahn, 30(b)(6) Deposition May 12, 2022, pp. 194-198.

⁴⁴ Defendant and Counterclaimant ROSS Intelligence Inc.'s Supplemental Responses and Objections to Plaintiffs' Set of Interrogatories (Supplemental Response to Interrogatory No. 11 Only), February 22, 2022, Supplemental Answer to Interrogatory No. 11, p. 63.

⁴⁵ Jimoh Ovbiagele, 30(b)(6) Deposition April 12, 2022, pp. 186-188.

⁴⁶ Jimoh Ovbiagele, 30(b)(6) Deposition April 12, 2022, p. 187.

⁴⁷ Jimoh Ovbiagele, 30(b)(6) Deposition April 12, 2022, p. 188.

⁴⁸ [REDACTED] ROSS-009722263-ROSS-009722299 at ROSS-009722264.

⁴⁹ Defendant and Counterclaimant ROSS Intelligence Inc.'s Supplemental Responses and Objections to Plaintiffs' Set of Interrogatories (Supplemental Response to Interrogatory No. 11 Only), February 22, 2022, Supplemental Answer to Interrogatory No. 2, p. 12.

**HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER**



[REDACTED]

[REDACTED]

5.2 [REDACTED]

[REDACTED]

⁵⁰ Jimoh Ovbiagele, 30(b)(6) Deposition April 12, 2022, pp. 184-185.

⁵¹ Jimoh Ovbiagele, 30(b)(6) Deposition April 12, 2022, pp. 186-187.

⁵² Opening Expert Report of Dr. Jonathan L. Krein, August 1, 2022, p. 65.

⁵³ Expert Report of James E. Malackowski, August 1, 2022, pp. 26-27.

⁵⁴ Opening Expert Report of Dr. Jonathan L. Krein, August 1, 2022, pp. 34-37.

⁵⁵ Khalid Al-Kofahi, Deposition April 8, 2022, pp. 16-17, 19.

⁵⁶ Khalid Al-Kofahi, Deposition April 8, 2022, p. 144.

⁵⁷ Khalid Al-Kofahi, Deposition April 8, 2022, pp. 52-53, 132-133.

⁵⁸ Khalid Al-Kofahi, Deposition April 8, 2022, pp. 97-98.

**HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER**



[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

⁵⁹ Khalid Al-Kofahi, Deposition April 8, 2022, pp. 23-24.

⁶⁰ Khalid Al-Kofahi, Deposition April 8, 2022, p. 20.

⁶¹ Khalid Al-Kofahi, Deposition April 8, 2022, pp. 20-21.

⁶² Khalid Al-Kofahi, Deposition April 8, 2022, pp. 23-24.

⁶³ Khalid Al-Kofahi, Deposition April 8, 2022, p. 22.

⁶⁴ Isabelle Moulinier, 30(b)(6) Deposition July 1, 2022, pp. 12-13.

⁶⁵ Isabelle Moulinier, 30(b)(6) Deposition July 1, 2022, pp. 13-14.

⁶⁶ Major Thomson Reuters Launch: Westlaw Edge, West Search Plus, Analytics, Enhances Citator and More, Jean O'Grady, July 12, 2018, Dewey B Strategic, <https://www.deweybstrategic.com/2018/07/6838.html>.

**HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER**



[REDACTED]

[REDACTED]

5.3

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

⁶⁷ [REDACTED] TR-0037669-TR-0037676 at TR-0037674.

⁶⁸ Khalid Al-Kofahi, Deposition April 8, 2022, p. 60.

⁶⁹ Isabelle Moulinier, 30(b)(6) Deposition July 1, 2022, p. 143; Opening Expert Report of Dr. Jonathan L. Krein, August 1, 2022, pp. 36-37.

⁷⁰ Isabelle Moulinier, 30(b)(6) Deposition July 1, 2022, pp. 77-78.

⁷¹ Expert Report of Alan J. Cox, Ph.D., August 1, 2022, p. 6.

⁷² Expert Report of Alan J. Cox, Ph.D., August 1, 2022, p. 5.

⁷³ Free vs. Westlaw: Why you need the West Key Number System, Thomson Reuters, <https://legal.thomsonreuters.com/en/insights/articles/using-the-west-key-numbers-system>.

⁷⁴ Interview of Jonathan Krein, Ph.D.

⁷⁵ Expert Report of Alan J. Cox, Ph.D., August 1, 2022, p. 6.

**HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER**



[REDACTED]

[REDACTED]

5.4 [REDACTED]

[REDACTED]

⁷⁶ Expert Report of Alan J. Cox, Ph.D., August 1, 2022, p. 6.

⁷⁷ Expert Report of Alan J. Cox, Ph.D., August 1, 2022, pp. 6-7.

⁷⁸ Interview of Jonathan Krein, Ph.D.

⁷⁹ Interview of Jonathan Krein, Ph.D.

⁸⁰ Expert Report of Alan J. Cox, Ph.D., August 1, 2022, pp. 29-30.

⁸¹ Defendant and Counterclaimant ROSS Intelligence Inc.'s Supplemental Responses and Objections to Plaintiffs' Set of Interrogatories (Supplemental Response to Interrogatory No. 11 Only), February 22, 2022, Supplemental Answer to Interrogatory No. 11, p. 63.

**HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER**



[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

⁸² Jimoh Ovbiagele, 30(b)(6) Deposition April 12, 2022, pp. 186-188.

⁸³ Expert Report of James E. Malackowski, August 1, 2022, p. 59.

⁸⁴ Plaintiffs and Counterdefendants Thomson Reuters Enterprise Centre GmbH and West Publishing Corporation's Second Supplemental Responses and Objections to Defendant and Counterclaimant ROSS Intelligence Inc.'s Interrogatory No. 21, June 9, 2022, First Supplemental Response to Interrogatory No. 21, p. 22.

⁸⁵ Expert Report of James E. Malackowski, August 1, 2022, Schedule 1.2

⁸⁶ Plaintiffs and Counterdefendants Thomson Reuters Enterprise Centre GmbH and West Publishing Corporation's Second Supplemental Responses and Objections to Defendant and Counterclaimant ROSS Intelligence Inc.'s Interrogatory No. 21, June 9, 2022, First Supplemental Response to Interrogatory No. 21, p. 22.

**HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER**



6

[REDACTED]

6.1

[REDACTED]

⁸⁷ Expert Report of James E. Malackowski, August 1, 2022, pp. 13-17.

⁸⁸ Expert Report of Alan J. Cox, Ph.D., August 1, 2022, p. 28.

⁸⁹ Andrew Arruda, Deposition March 30, 2022, pp. 39, 103, 114; [REDACTED] ROSS-003705907-ROSS-003705908 at ROSS-003705907; Declaration of Andrew Arruda, *West Publishing Corporation v. LegalEase Solutions, LLC*, Case No. 0:18-cv-01445, October 1, 2019, p. 2; Tomas van der Heijden, 30(b)(6) Deposition March 17, 2022, p. 55.

⁹⁰ [REDACTED] ROSS-003705907-ROSS-003705908 at ROSS-003705907.

⁹¹ Andrew Arruda, Deposition March 30, 2022, pp. 39, 112, 114.

⁹² [REDACTED] ROSS-009501052-ROSS-009501053 at ROSS-009501052.

⁹³ [REDACTED] ROSS-009501052-ROSS-009501053 at ROSS-009501052.

⁹⁴ [REDACTED] ROSS-010114898-ROSS-010114899.

⁹⁵ [REDACTED]

ROSS-003389728-ROSS-0003389730 at ROSS-003389728.

**HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER**



[REDACTED]

6.2

[REDACTED]

[REDACTED]

⁹⁶ Complaint, May 6, 2020, pp. 11-14.

⁹⁷ Expert Report of Alan J. Cox, Ph.D., August 1, 2022, p. 19.

⁹⁸ Expert Report of Alan J. Cox, Ph.D., August 1, 2022, p. 20.

⁹⁹ Interview of Jonathan Krein, Ph.D.

¹⁰⁰ Expert Report of Alan J. Cox, Ph.D., August 1, 2022, pp. 24-25.

¹⁰¹ Expert Report of Alan J. Cox, Ph.D., August 1, 2022, pp. 21-25.

¹⁰² Expert Report of Alan J. Cox, Ph.D., August 1, 2022, p. 24.

¹⁰³ Expert Report of Alan J. Cox, Ph.D., August 1, 2022, p. 24.

**HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER**



[REDACTED]

6.3 [REDACTED]

[REDACTED]

¹⁰⁴ Free vs. Westlaw: Why you need the West Key Number System, Thomson Reuters, <https://legal.thomsonreuters.com/en/insights/articles/using-the-west-key-numbers-system>.

¹⁰⁵ Emphasis in original. Free vs. Westlaw: Why you need the West Key Number System, Thomson Reuters, <https://legal.thomsonreuters.com/en/insights/articles/using-the-west-key-numbers-system>.

¹⁰⁶ Free vs. Westlaw: Why you need the West Key Number System, Thomson Reuters, <https://legal.thomsonreuters.com/en/insights/articles/using-the-west-key-numbers-system>.

¹⁰⁷ Expert Report of Alan J. Cox, Ph.D., August 1, 2022, p. 25.

¹⁰⁸ Expert Report of Alan J. Cox, Ph.D., August 1, 2022, p. 25.

¹⁰⁹ Expert Report of Alan J. Cox, Ph.D., August 1, 2022, p. 34.

¹¹⁰ [REDACTED] ROSS-009501052-ROSS-009501053 at ROSS-009501052.

**HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER**



7

[REDACTED]

7.1

[REDACTED]

[REDACTED]

¹¹¹ Expert Report of Alan J. Cox, Ph.D., August 1, 2022, p. 37.

¹¹² Expert Report of Alan J. Cox, Ph.D., August 1, 2022, p. 38, footnote 153.

¹¹³ Longtime Competitors Fastcase and Casemaker Merge, Reshaping the Legal Research Landscape, Bob Ambrogi, LawSites, January 5, 2021, <https://www.lawnext.com/2021/01/longtime-competitors-fastcase-and-casemaker-merge-reshaping-the-legal-research-landscape.html>.

¹¹⁴ Expert Report of Alan J. Cox, Ph.D., August 1, 2022, p. 37.

¹¹⁵ Expert Report of James E. Malackowski, August 1, 2022, pp. 13-17.

**HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER**



7.2

[REDACTED]

[REDACTED]

[REDACTED]

¹¹⁶ Expert Report of Alan J. Cox, Ph.D., August 1, 2022, p. 38, footnote 153.

¹¹⁷ Complaint, May 6, 2020, p. 8.

¹¹⁸ Expert Report of Alan J. Cox, Ph.D., August 1, 2022, p. 38, footnote 153.

¹¹⁹ Expert Report of Alan J. Cox, Ph.D., August 1, 2022, p. 38, footnote 153.

¹²⁰ Bloomberg Hangs New Shingle, The Wall Street Journal, July 8, 2010, <https://www.wsj.com/articles/SB10001424052748704545004575353143750422612>.

¹²¹ Complaint, May 6, 2020, p. 8.

**HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER**



[REDACTED]

**HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER**



8 [REDACTED]

[REDACTED]

8.1 [REDACTED]

[REDACTED]

[REDACTED]

¹²² Expert Report of Alan J. Cox, Ph.D., August 1, 2022, p. 35.

¹²³ Expert Report of Alan J. Cox, Ph.D., August 1, 2022, p. 35.

¹²⁴ Expert Report of Alan J. Cox, Ph.D., August 1, 2022, pp. 7, 35-40.

¹²⁵ Swatch Grp. Mgmt. Servs. Ltd. v. Bloomberg L.P., 756 F.3d 73, 91 (2nd Cir. 2014).

¹²⁶ Sony Corp. of Am. v. Universal City Studios, Inc., 464 U.S. 417, 450-51 (1984).

¹²⁷ *Monge v. Maya Magazines, Inc.*, 688 F.3d 1164, 1191-1192 (9th Cir. 2012).

¹²⁸ *Kelly v. Arriba Soft Corp.*, 336 F.3d 811, 821 (9th Cir. 2002).

¹²⁹ Expert Report of Alan J. Cox, Ph.D., August 1, 2022, p. 35.

¹³⁰ *Am. Geophysical Union v. Texaco Inc.*, 60 F.3d 913, 930 (2d Cir. 1994).

**HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER**



[REDACTED]

[REDACTED]

8.2

[REDACTED]

[REDACTED]

¹³¹ *Monge v. Maya Magazines, Inc.*, 688 F.3d 1164, 1183-1184 (9th Cir. 2012).

¹³² Expert Report of Alan J. Cox, Ph.D., August 1, 2022, p. 36.

¹³³ Expert Report of Alan J. Cox, Ph.D., August 1, 2022, p. 36.

¹³⁴

[REDACTED] ROSS-003334354;

[REDACTED] TR-0038909-TR-0038920;

[REDACTED] ROSS-

[REDACTED] 000304769-ROSS-000304784 at ROSS-000304771-ROSS-000304774;

[REDACTED] ROSS-003389728-ROSS-0003389730 at ROSS-003389728.

**HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER**



[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

¹³⁵ Opening Expert Report of Dr. Jonathan L. Krein, August 1, 2022, pp. 75, 89.

¹³⁶ Interview of Jonathan Krein, Ph.D.

¹³⁷ Jimoh Ovbiagele, 30(b)(6) Deposition April 12, 2022, p. 227.

¹³⁸ Jimoh Ovbiagele, 30(b)(6) Deposition April 12, 2022, pp. 167-168.

¹³⁹ Isabelle Moulinier, 30(b)(6) Deposition July 1, 2022, p. 143.

¹⁴⁰ Khalid Al-Kofahi, Deposition April 8, 2022, pp. 16-17, 20; Isabelle Moulinier, 30(b)(6) Deposition July 1, 2022, pp. 12-13; Major Thomson Reuters Launch: Westlaw Edge, West Search Plus, Analytics, Enhances Citator and More, Jean O'Grady, July 12, 2018, Dewey B Strategic, <https://www.deweybstrategic.com/2018/07/6838.html>.

¹⁴¹ Expert Report of James E. Malackowski, August 1, 2022, pp. 46-48.

¹⁴² Expert Report of James E. Malackowski, August 1, 2022, pp. 46-48.

¹⁴³ Opening Expert Report of Dr. Jonathan L. Krein, August 1, 2022, pp. 79-88.

**HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER**



[REDACTED]

**HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER**



9 [REDACTED]

I declare under penalty of perjury under the laws of the United States that the foregoing is true and correct.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "James E. Malackowski", written over a horizontal line.

James E. Malackowski

September 6, 2022

Date

**HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER**

EXHIBIT AZ



OCEAN TOMO®

A PART OF  **JS|HELD**

THOMSON REUTERS ENTERPRISE CENTRE GMBH AND WEST PUBLISHING CORPORATION

v.

ROSS INTELLIGENCE INC.

**UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

Civil Action No. 1:20-cv-00613-SB

REPLY EXPERT REPORT OF JAMES E. MALACKOWSKI

October 18, 2022

**HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER**



4 [REDACTED]

[REDACTED]

4.1 [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

²¹ Expert Report of Alan J. Cox, Ph.D., September 20, 2022, pp. 13-14, 22-31.

²² Complaint, May 6, 2020, p. 11.

²³ Plaintiffs and Counterdefendants Thomson Reuters Enterprise Centre GmbH and West Publishing Corporation's Third Supplemental Responses and Objections to Defendant and Counterclaimant ROSS Intelligence Inc.'s Interrogatory No. 1, Supplemental Response to Interrogatory No. 1 (November 19, 2021), p. 14.

²⁴ Expert Report of James E. Malackowski, August 1, 2022, pp. 53-54.

**HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER**



[REDACTED]

[REDACTED]

[REDACTED]

4.2

[REDACTED]

[REDACTED]

²⁵ Complaint, May 6, 2020, pp. 10-11.

²⁶ Complaint, May 6, 2020, p. 11.

²⁷ Jimoh Ovbiagele, 30(b)(6) Deposition April 12, 2022, pp. 186-188.

²⁸ Jimoh Ovbiagele, 30(b)(6) Deposition April 12, 2022, p. 187.

²⁹ Expert Report of Alan J. Cox, Ph.D., September 20, 2022, pp. 8-9.

**HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER**



³⁰ Expert Report of Alan J. Cox, Ph.D., September 20, 2022, pp. 8-9.

³¹ Tariq Hafeez, 30(b)(6) Deposition May 26, 2022, pp. 89, 93-94.

³²

[REDACTED] TR-0039808-TR-0039813.

³³

[REDACTED] ROSS-000319118-ROSS-000319119 at ROSS-000319118.

³⁴ Tariq Hafeez, 30(b)(6) Deposition May 26, 2022, pp. 89, 93-94.

³⁵ Tariq Hafeez, 30(b)(6) Deposition May 26, 2022, pp. 153-154.

³⁶

[REDACTED] LEGALEASE-00059362.

³⁷ Tariq Hafeez, 30(b)(6) Deposition May 26, 2022, p. 99.

**HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER**



5 [REDACTED]

[REDACTED]

5.1 [REDACTED]

[REDACTED]

5.1.1 [REDACTED]

[REDACTED]

[REDACTED]

³⁸ Expert Report of Alan J. Cox, Ph.D., September 20, 2022, pp. 9-10.

³⁹ [REDACTED] TR-0894151-TR0894157 at TR-0894151; [REDACTED] TR-0836004, [REDACTED]; [REDACTED] TR-0002846-TR-0002847.

⁴⁰ Expert Report of Alan J. Cox, Ph.D., September 20, 2022, p. 10.

⁴¹ Interview of Mark Hoffman.

⁴² Expert Report of James E. Malackowski, August 1, 2022, pp. 43, 49.

**HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER**



[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

5.1.2 [REDACTED]

[REDACTED]

⁴³ [REDACTED]
TR-0002844-TR-0002845 at TR-0002844.

⁴⁴ [REDACTED]
TR-0002844-TR-0002845 at TR-0002844.

⁴⁵ Expert Report of Alan J. Cox, Ph.D., September 20, 2022, p. 16.

⁴⁶ Expert Report of Alan J. Cox, Ph.D., September 20, 2022, p. 16.

**HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER**



[REDACTED]

[REDACTED]

[REDACTED]

⁸⁹ [REDACTED] ROSS-003487472-ROSS-003487474 at ROSS-003487472.

⁹⁰ [REDACTED] ROSS-003487472-ROSS-003487474 at ROSS-003487472.

⁹¹ Andrew Arruda, Deposition March 30, 2022, pp. 62-66.

⁹² Defendant and Counterclaimant ROSS Intelligence Inc.'s Supplemental Responses and Objections to Plaintiffs' First Set of Interrogatories, January 11, 2022, Supplemental Answer to Interrogatory No. 2, pp. 11-12.

⁹³ Expert Report of Alan J. Cox, Ph.D., September 20, 2022, p. 21, Exhibit 3.4.

**HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER**



8 [REDACTED]

I declare under penalty of perjury under the laws of the United States that the foregoing is true and correct.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "James E. Malackowski", written over a horizontal line.

James E. Malackowski

October 18, 2022

Date

**HIGHLY CONFIDENTIAL - ATTORNEYS' EYES ONLY
SUBJECT TO PROTECTIVE ORDER**

EXHIBIT BA

ARTICLE

Free vs. Westlaw : Why you need the West Key Number System

Maggie Keefe
Reference Attorney

🕒 4 min



Feedback

Every legal researcher's goal is to find the best way to zero in on a particular legal issue and quickly find on-point cases. However, with the huge amount of information available on the internet, is it really possible to find the perfect case quickly? Even if you are able to find a relevant case quickly, can you feel confident that there isn't another case out there that is a better fit? Surprisingly, the answer to both of these questions is yes. The best way for an attorney to ensure that they are relying on arguments that reflect the true nature of the law is to use [KeyCite](#) on [Westlaw](#) and [Westlaw Edge](#).

About the Key Number System

The Key Number System was the first of its kind when created by West Publishing more than 100 years ago. A master classification system of U.S. law, the Key Number System allows our Attorney Editors to organize cases by corresponding legal issues and topics. Our Key Number Digest books help legal researchers quickly and efficiently find relevant case law among the stacks and shelves in vast law libraries. Few analog tools have made the transition to our digital world better than Key Numbers, and using Key Numbers on Westlaw can make quick work of complicated legal research tasks. Use any of the methods below to take advantage of West's Key Number System, integrated with KeyCite on Westlaw and Westlaw Edge.

WESTLAW EDGE - PLANS AND PRICING

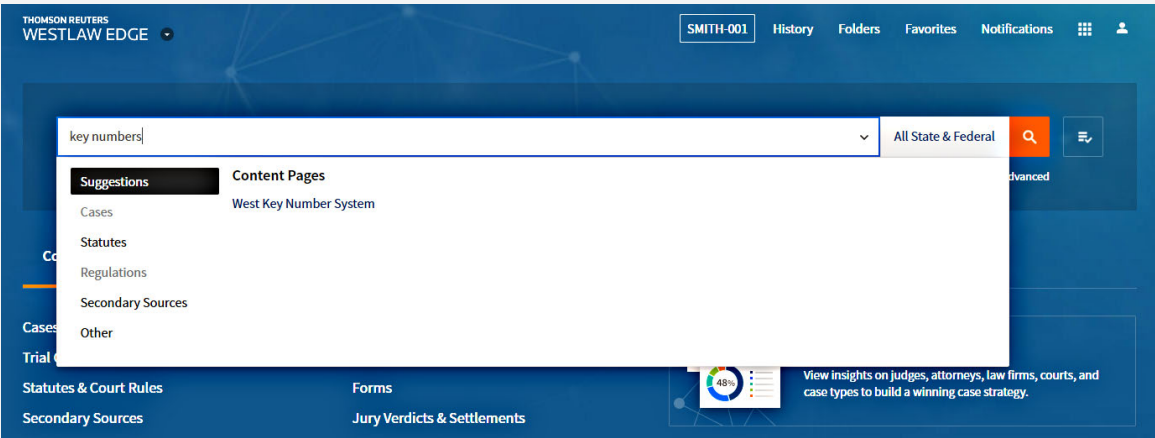
Explore and customize Westlaw Edge plans that meet your firm's unique needs



Browse comprehensive Key Numbers to pinpoint legal concepts

The first step in utilizing the Key Number System is finding an applicable Key Number. The Westlaw homepage link to “Key Numbers” allows you to browse to level of specificity by topic. Alternatively, a link appears under the Content Pages autosuggestion when you start to type Key Numbers in the search bar at the top of the screen. WestSearch Plus on Westlaw Edge provides superior research suggestions right from the search box, then provides the most relevant text for your legal query without the need to dive into a result list.

Content types	Federal materials	State materials	Practice areas
Cases		Briefs	
Trial Court Orders		Expert Materials	
Statutes & Court Rules		Forms	
Secondary Sources		Jury Verdicts & Settlements	
Practical Law		Key Numbers	
Regulations		Proposed & Adopted Regulations	
Administrative Decisions & Guidance		Proposed & Enacted Legislation	
Arbitration Materials		Trial Court Documents	



By clicking these links, you are brought to the West Key Number System content page. Narrowing by topic will ultimately take you to a list of headnotes, the equivalent of a particular Key Number Digest in print. From here, you can **run a search or narrow by jurisdiction** as needed.

THOMSON REUTERS
WESTLAW EDGE

SMITH-001HistoryFoldersFavoritesNotifications

302 PLEADINGSearch 302 PLEADINGAll State & Federal

Home > West Key Number System

302 PLEADING

Add to FavoritesCopy link

Select all contentNo Items selectedClear Selection

☒ Specify Content to SearchExpand All

I. FORM AND ALLEGATIONS IN GENERAL, k1-k38

II. DECLARATION, COMPLAINT, PETITION, OR STATEMENT, k38.5-k75

III. RESPONSES OR RESPONSIVE PLEADINGS IN GENERAL, k76-k161

IV. REPLICATION OR REPLY AND SUBSEQUENT PLEADINGS, k162-k186

V. DEMURRER OR EXCEPTION, k187-k228.23

If you navigate back to the main Key Number page, you can see two options: **search headnotes** or **Key Numbers and topics**. The main search bar at the top of the screen will search across all of the headnotes within the Key Number System. This is helpful to find headnotes related to your issue and then see where they are classified within the Key Number System. The second search bar in the gray box searches only Key Numbers and topics. This option helps to find specific Key Numbers that use the language you have, whereas the search in headnotes provides a broader option to find helpful headnotes or related Key Numbers.

THOMSON REUTERS
WESTLAW EDGE

SMITH-001HistoryFoldersFavoritesNotifications

West Key Num...Search West Key Number HeadnotesAll State & Federal

Home

West Key Number System

Add to FavoritesCopy link

Search for Key Numbers relevant to your issue

Enter terms e.g., landlord duty of care to trespassers

Search

Jurisdiction selected: All State & FederalChange Jurisdiction

☒ Specify Content to Search

LOCATE cases discussing similar legal concepts and principles

Finding one case on point will directly lead you to others through Key Numbers. *Headnotes are summaries of specific points of law addressed in a particular case, drafted by Westlaw Attorney Editors to ensure that topics include relevant cases even where those cases may use atypical language.* Applicable headnotes are always listed at the top of a case, and provide a good alternative entry point into the Key Number System. After reviewing cases and locating a helpful headnote, click into the Key Number System through the classification hierarchy next to the headnote. (You can change the headnote presentation using the view options at the top right of the first headnote.)

https://legal.thomsonreuters.com/en/insights/articles/using-the-west-key-numbers-system

3/5

West Headnotes (27)

1

Indemnity
In general, "indemnity" refers to the obligation resting on one party to make good a loss or damage another party has incurred.

16 Cases that cite this headnote

208
208I
208k20

Indemnity
In General
Nature of obligation

After choosing a Key Number, you can **search within** using the box along the left, or you may look in a different jurisdiction by using the **Change** link under the Key Number heading at the top of the page.

THOMSON REUTERS
WESTLAW EDGE

(1) In general Search (1) In general All State & Federal

Filter

Select multiple

Search within results

Key Number +

Jurisdiction +

Date +

Home > West Key Number System > 302 PLEADING > II. DECLARATION, COMPLAINT, PETITION, OR STATEMENT, k38.5-k75 > 50 Separate causes of action > 52—Separate statement and numbering

(231) In general

Add to Favorites Copy link

Jurisdiction: All State & Federal Change

1 - 20 Sort: Topic then Date

Select all items No items selected

302 PLEADING (Up to 10,000)

302II Declaration, Complaint, Petition, or Statement (Up to 10,000)

302II-50 Separate Causes of Action 925

302II-52 Separate Statement and Numbering 718

302II-52(1) In general. 231

SEARCH Key Numbers using comprehensive WestSearch

Finally, you can search Key Numbers across all Westlaw content by running a plain language search from the global search box on the homepage. You will see a link to Key Numbers in the gray bar along the left after running a search.

Expert Materials	6,902
Forms	248
Jury Verdicts & Settlements	3,212
Key Numbers	10
Proposed & Adopted Regulations	803
Proposed & Enacted Legislation	4,379
Trial Court Documents	10,000

For additional Westlaw tips, visit our [training and support page](#).

Not a Westlaw subscriber? [Learn more about Westlaw legal research](#).

https://legal.thomsonreuters.com/en/insights/articles/using-the-west-key-numbers-system

4/5

Related insights



Use litigation data to gain leverage

See how legal research helps litigators gain valuable insight into judges, courts, and opponents.



KeyCite Overruling Risk article

KeyCite Overruling Risk on Westlaw Edge goes beyond traditional citation checking. It is capable of detecting when a point of law in a case has been implicitly undermined.

Feedback

Ready for **Westlaw?**

Take the next step today

Shop plans



Search

LEGAL PRODUCTS

- Westlaw Edge
- Practical Law
- CLEAR
- Law Books
- See all products

SOLUTIONS

- Legal research
- Legal know-how
- Management and growth
- Litigation
- Drafting and contracts
- Risk and investigation

INSIGHTS

- Latest
- Case studies
- Artificial intelligence
- Big Data
- Data privacy
- FinTech

SUPPORT

- Support center
- Reference attorneys
- Legal notices
- About us
- Contact us

CONNECT

- Facebook
- Twitter
- LinkedIn
- YouTube



EXHIBIT BB

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

THOMSON REUTERS ENTERPRISE)	
CENTRE GMBH and WEST PUBLISHING)	
CORPORATION,	)	C.A. No. 20-613-SB
)	
Plaintiffs/Counterdefendants,	)	JURY TRIAL DEMANDED
)	
v.	)	HIGHLY CONFIDENTIAL –
	)	ATTORNEYS’ EYES ONLY
ROSS INTELLIGENCE INC.,)	
)	
Defendants/Counterclaimant.)	

**DEFENDANT AND COUNTERCLAIMANT ROSS INTELLIGENCE INC.’S
SUPPLEMENTAL RESPONSES AND OBJECTIONS TO
PLAINTIFFS’ SET OF INTERROGATORIES
(SUPPLEMENTAL RESPONSE TO INTERROGATORY NOS. 11 & 12 ONLY)**

Pursuant to Rules 26 and 33 of the Federal Rules of Civil Procedure and the Local Rules of Civil Practice and Procedure of the United States District Court for the District of Delaware (“the Local Rules”), Defendant/Counterclaimant ROSS Intelligence Inc. (“ROSS”) hereby supplement its response and objections to the First Set of Interrogatories to ROSS served by Plaintiffs Thomson Reuters Enterprise Centre Gmbh and West Publishing Co. (collectively, “Plaintiffs”) on May 12, 2021.

These responses are made solely for the purpose of this litigation. Each response is subject to all objections as to competence, relevance, materiality, propriety, and admissibility, and to any and all other objections on any grounds that would require the exclusion of any statements contained herein if such interrogatories were asked of, or statements contained herein were made by, a witness present and testifying in court, and all such objections are expressly reserved and may be asserted at the time of trial.

ROSS’s responses are based upon information presently available to and located by ROSS. ROSS has not completed its investigation of the facts relating to this case, discovery in this action,

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Category	Value (approximate percentage)
1	10
2	100
3	95
4	92
5	100
6	15

[illegible]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[illegible]

ANSWER TO INTERROGATORY NO. 13:

[REDACTED]

[REDACTED]

OF COUNSEL:

Gabriel M. Ramsey
Warrington Parker
Joachim B. Steinberg
Jacob Canter
CROWELL & MORING LLP
3 Embarcadero Center, 26th Floor
San Francisco, CA 94111
Tel: (415) 986-2800

Mark A. Klapow
Crinesha B. Berry
CROWELL & MORING LLP
1001 Pennsylvania Avenue, NW
Washington, DC 20004
Tel: (202) 624-2500

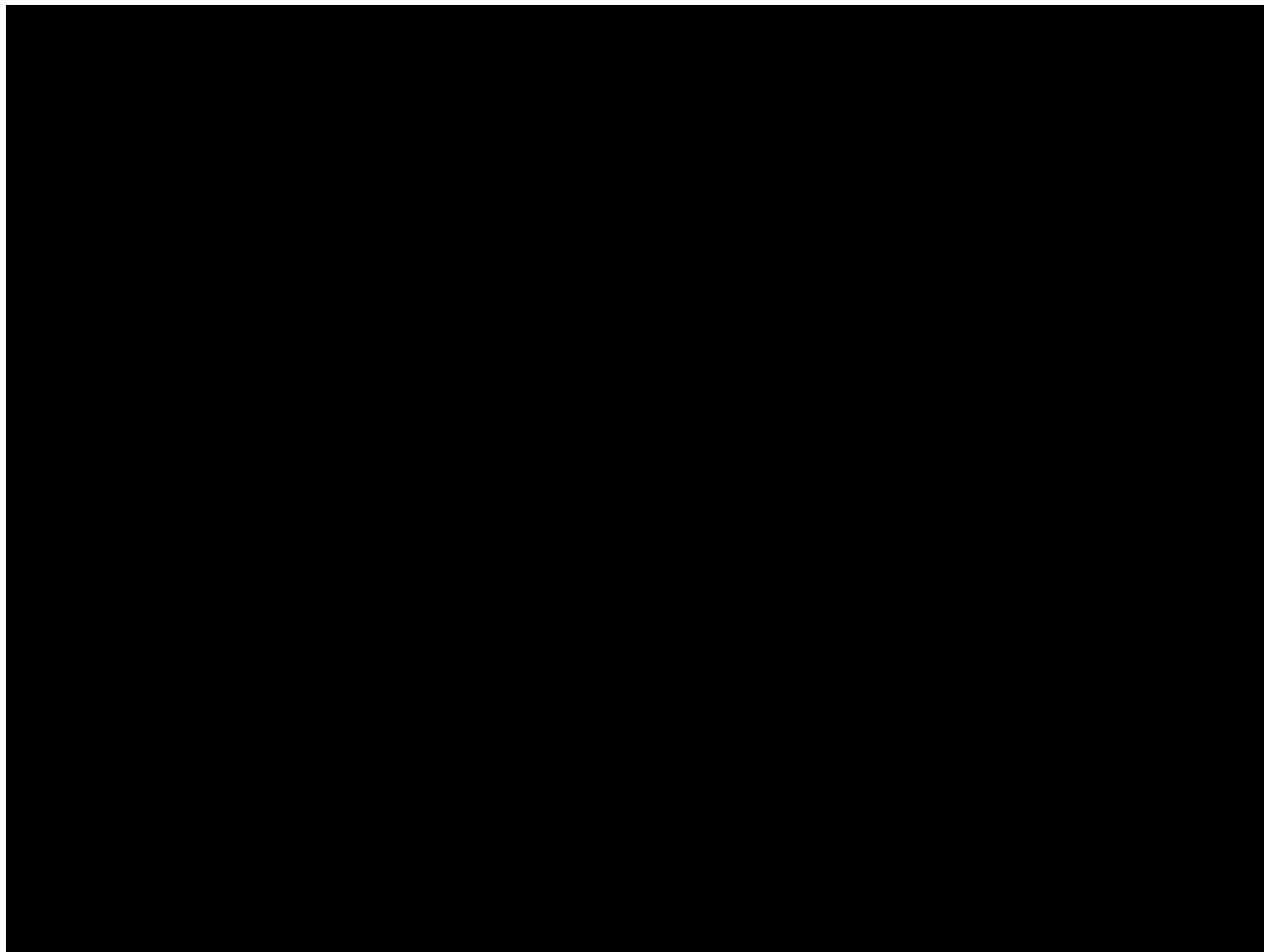
Dated: September 14, 2022
10338232 / 50241

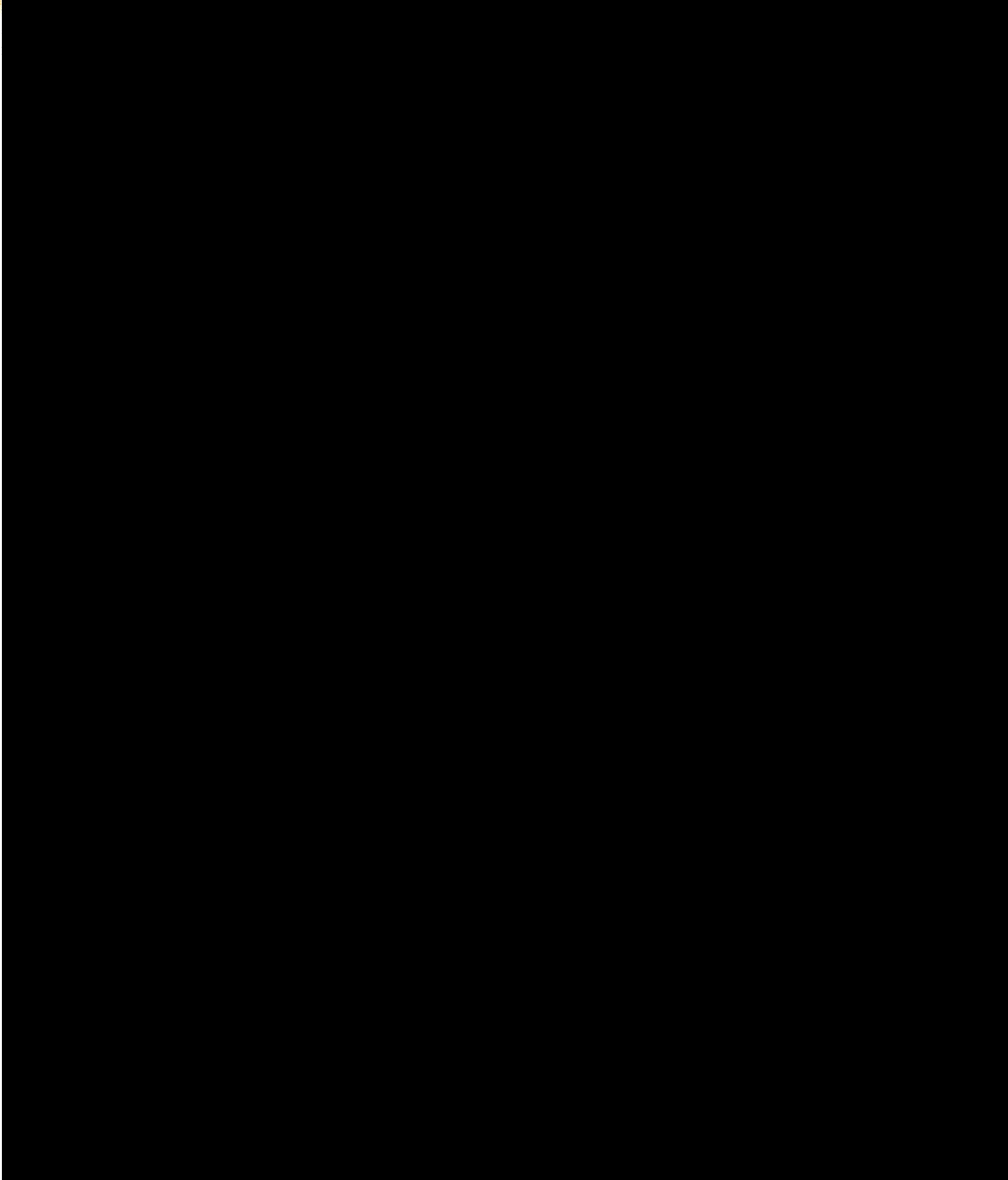
POTTER ANDERSON & CORROON LLP

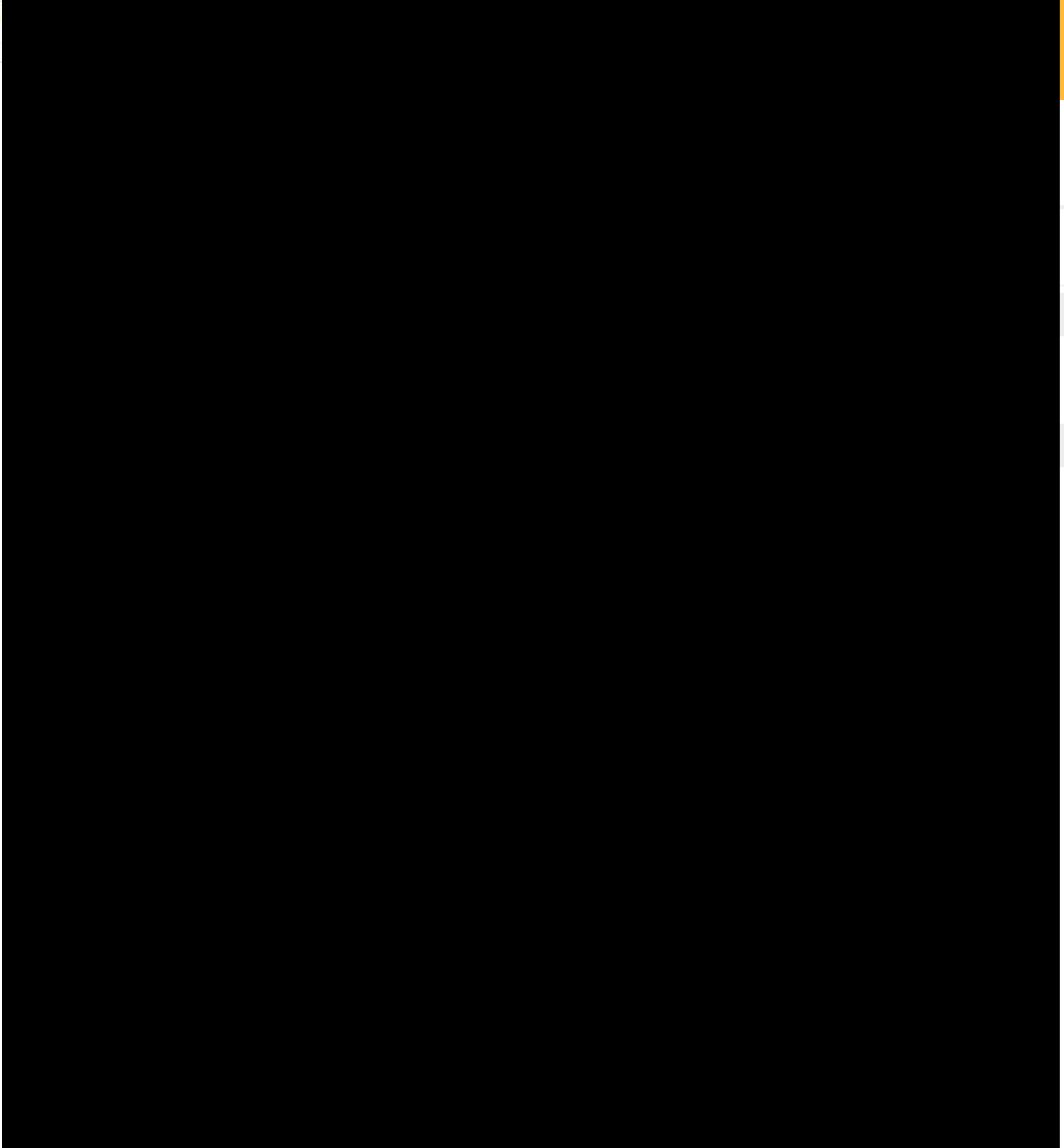
By: /s/ Bindu A. Palapura
David E. Moore (#3983)
Bindu A. Palapura (#5370)
Carson R. Bartlett (#6750)
Hercules Plaza, 6th Floor
1313 N. Market Street
Wilmington, DE 19801
Tel: (302) 984-6000
dmoore@potteranderson.com
bpalapura@potteranderson.com
cbartlett@potteranderson.com

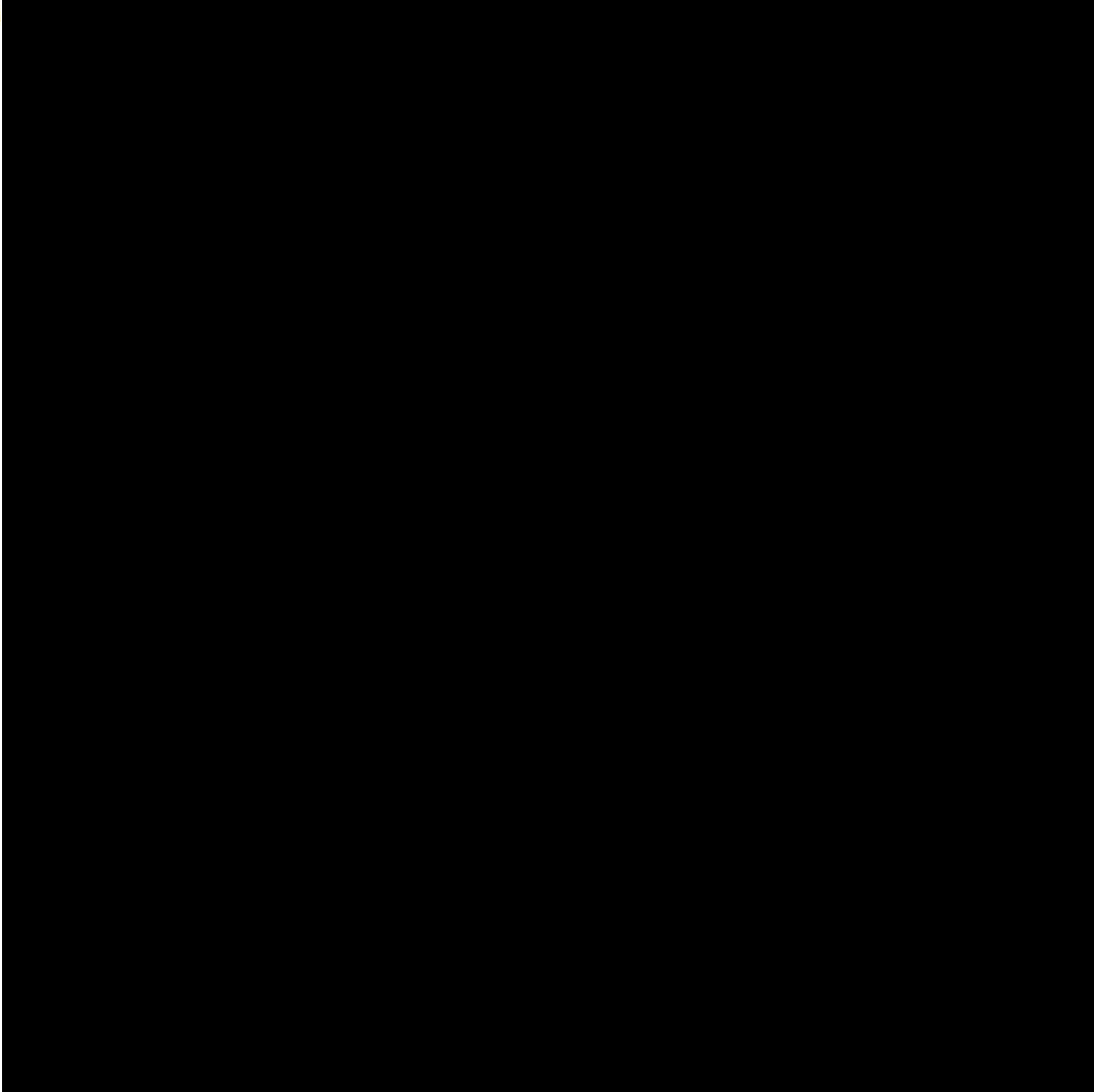
*Attorneys for Defendant/Counterclaimant
ROSS Intelligence, Inc.*

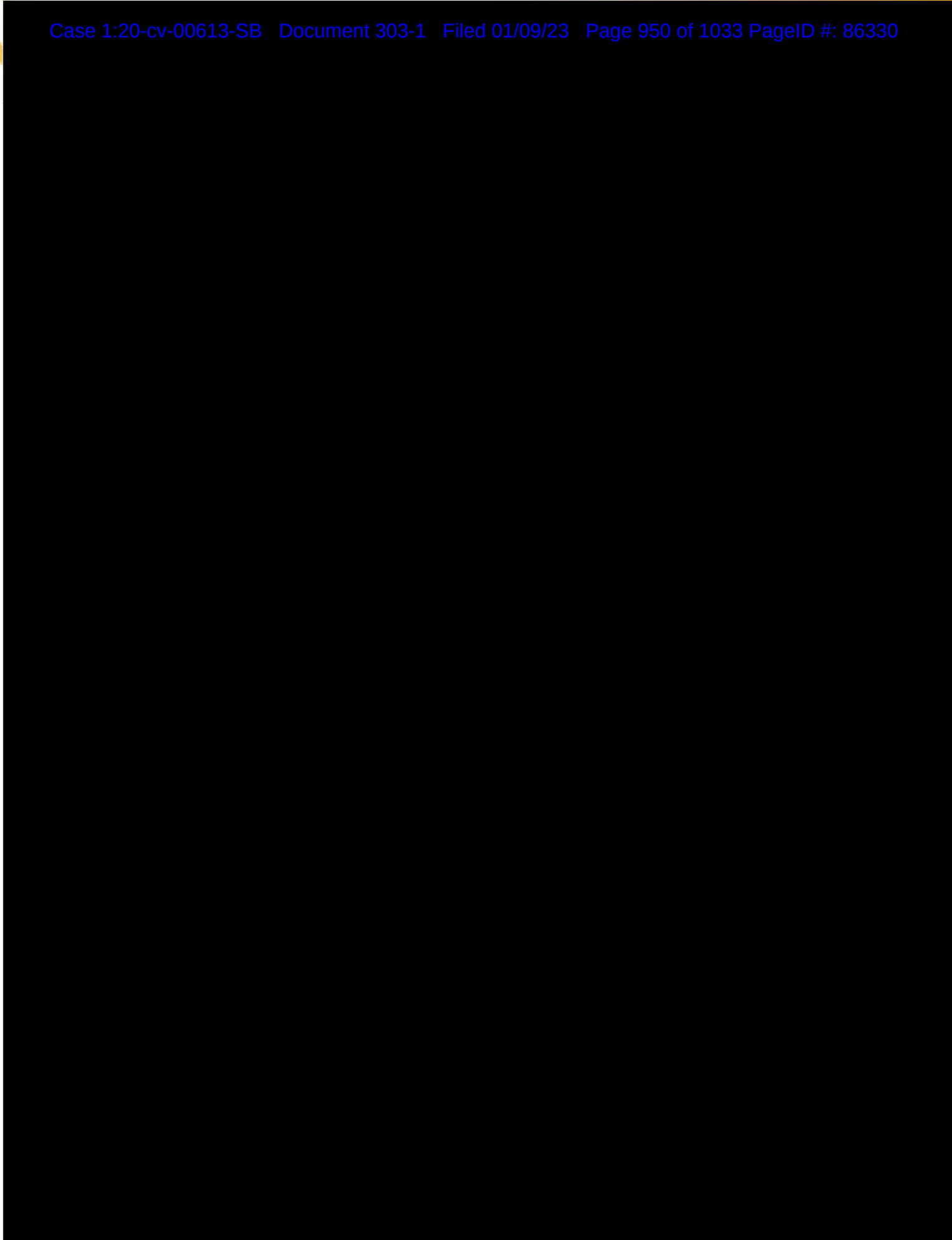
EXHIBIT BC

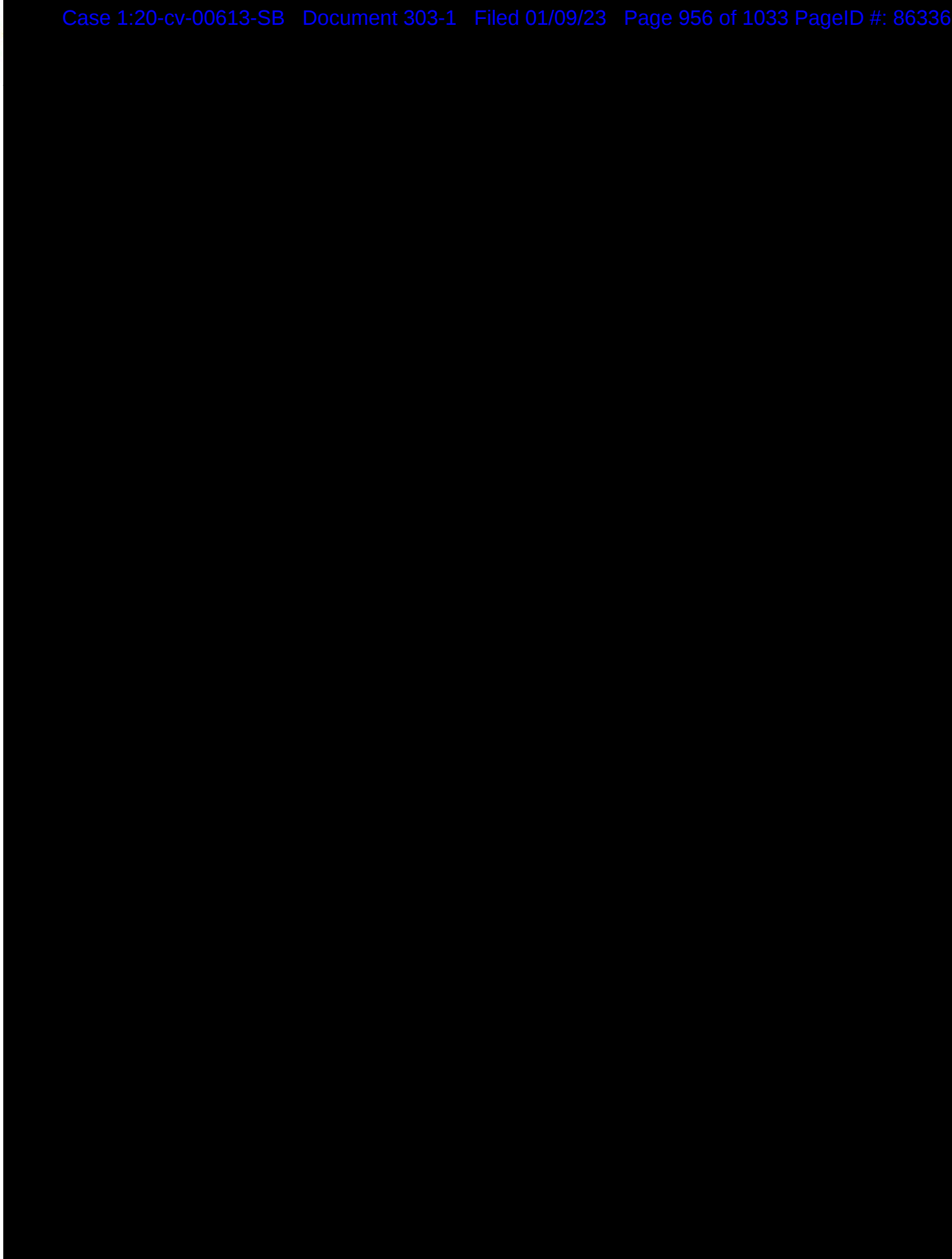


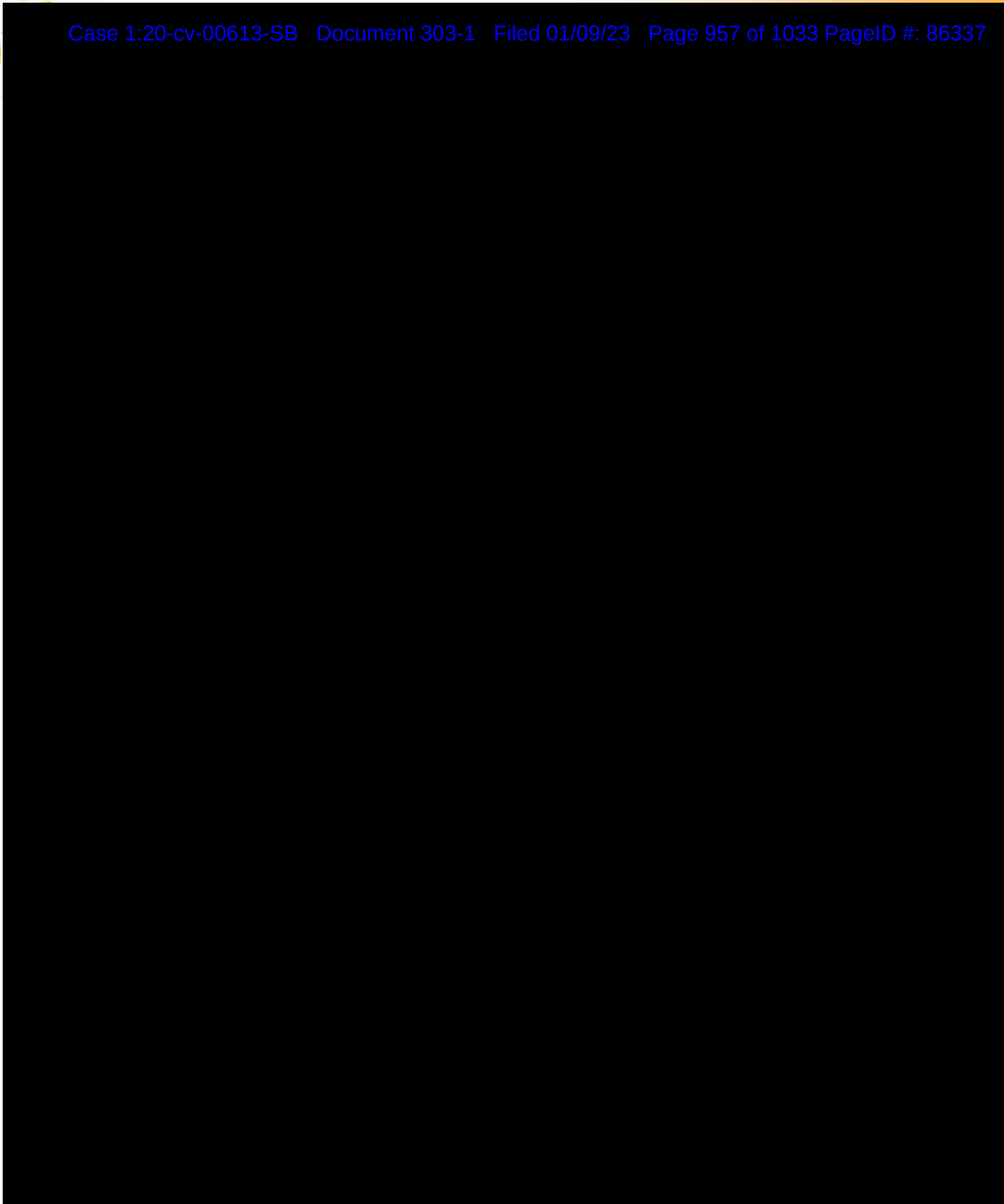












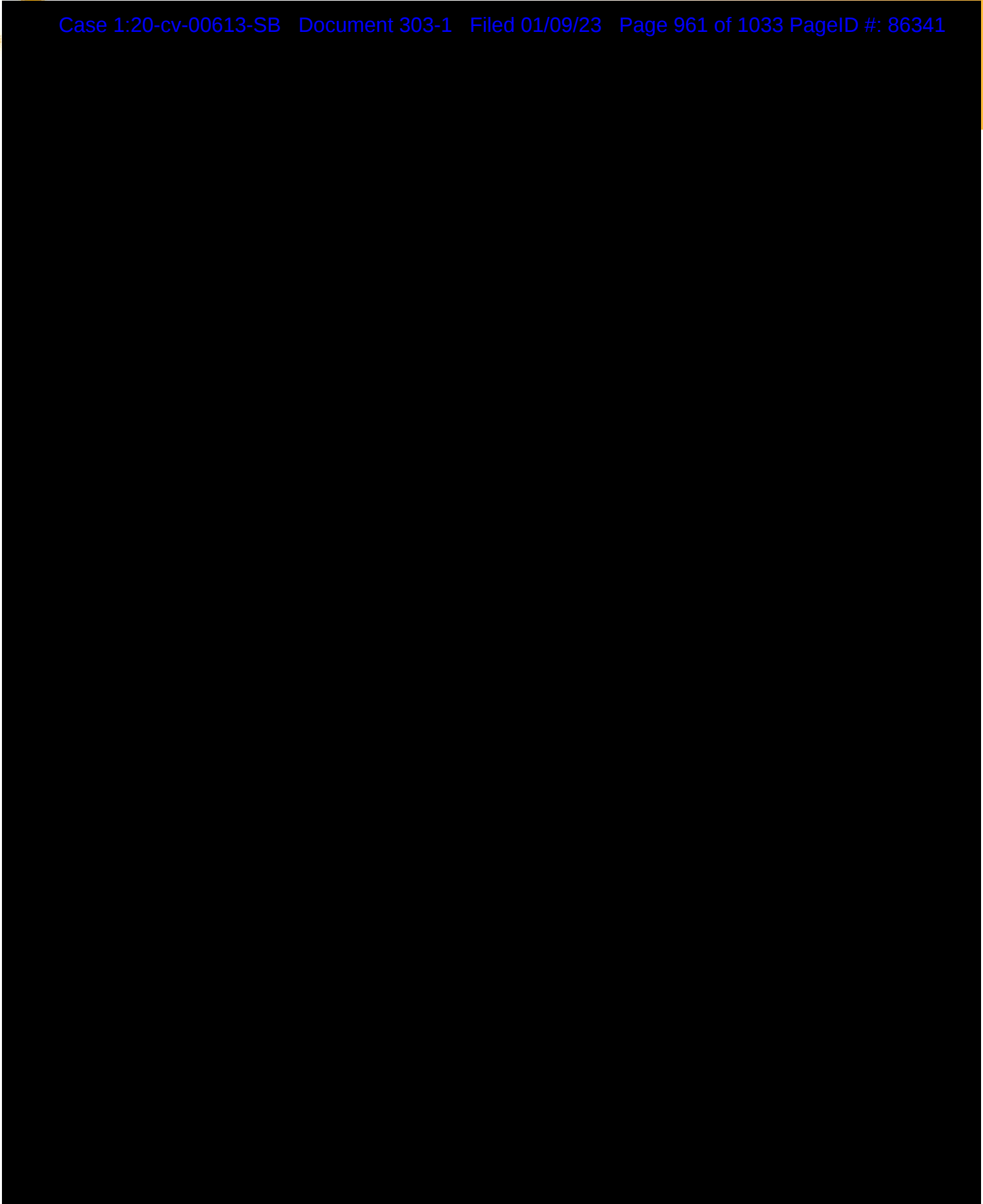
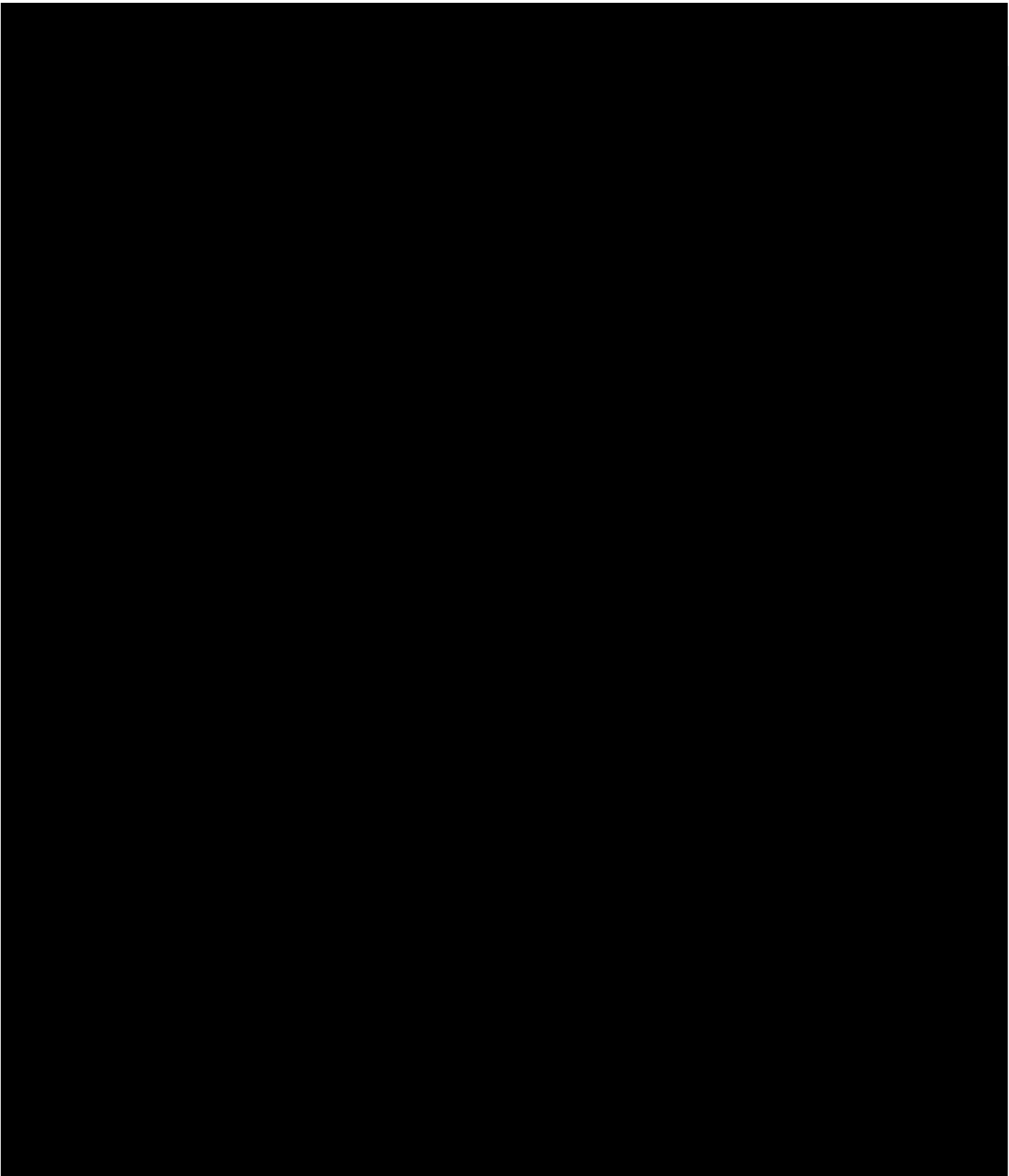
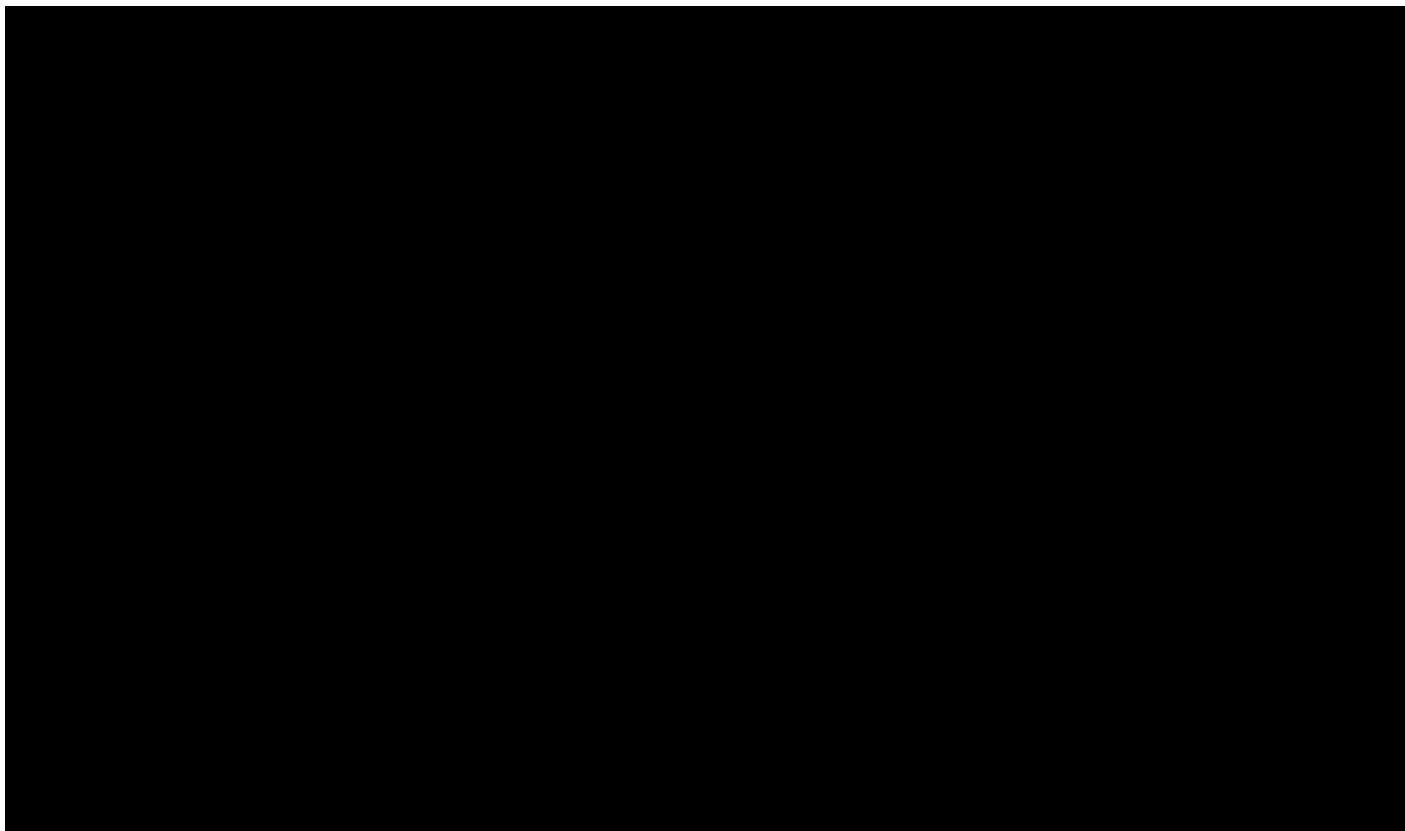
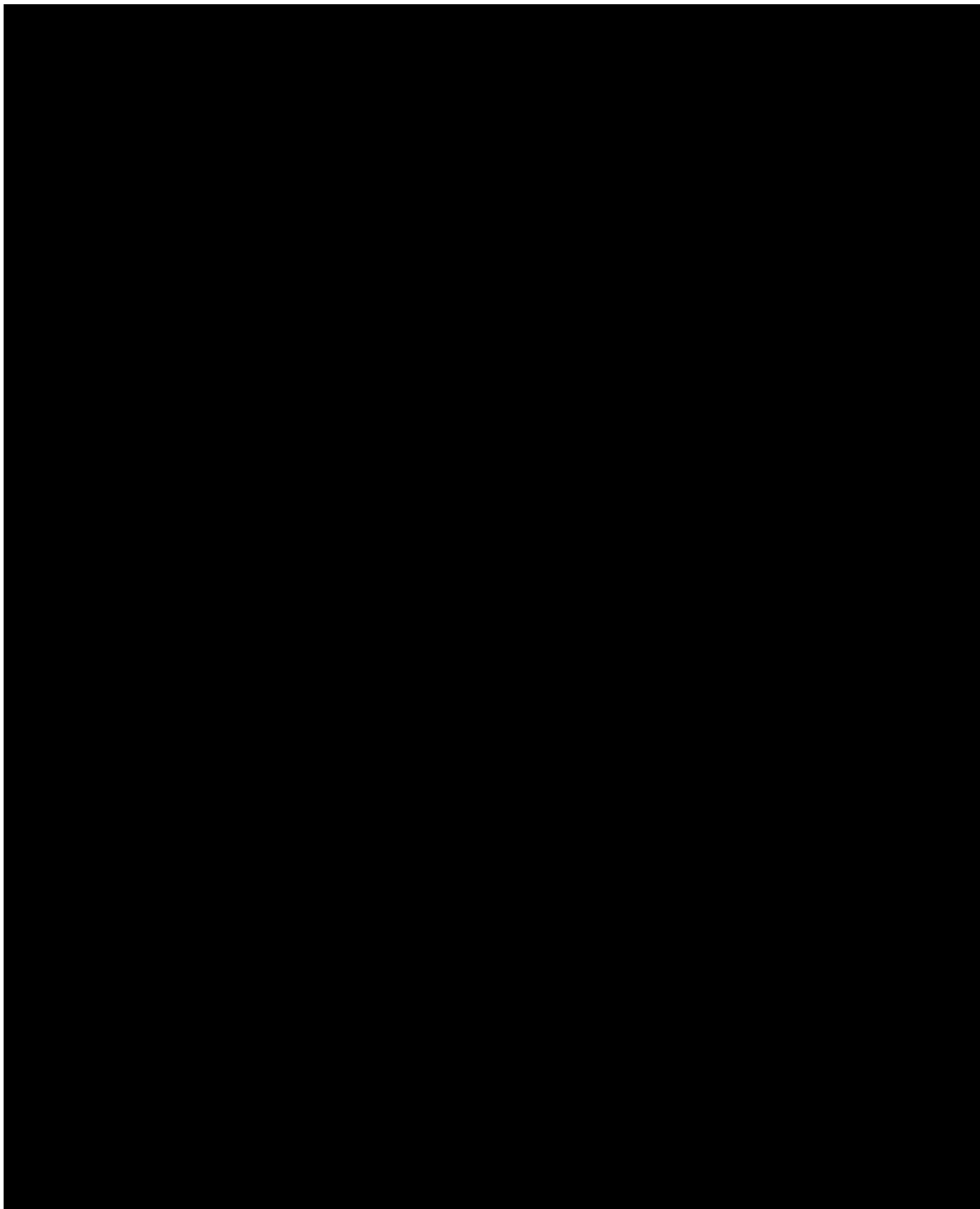
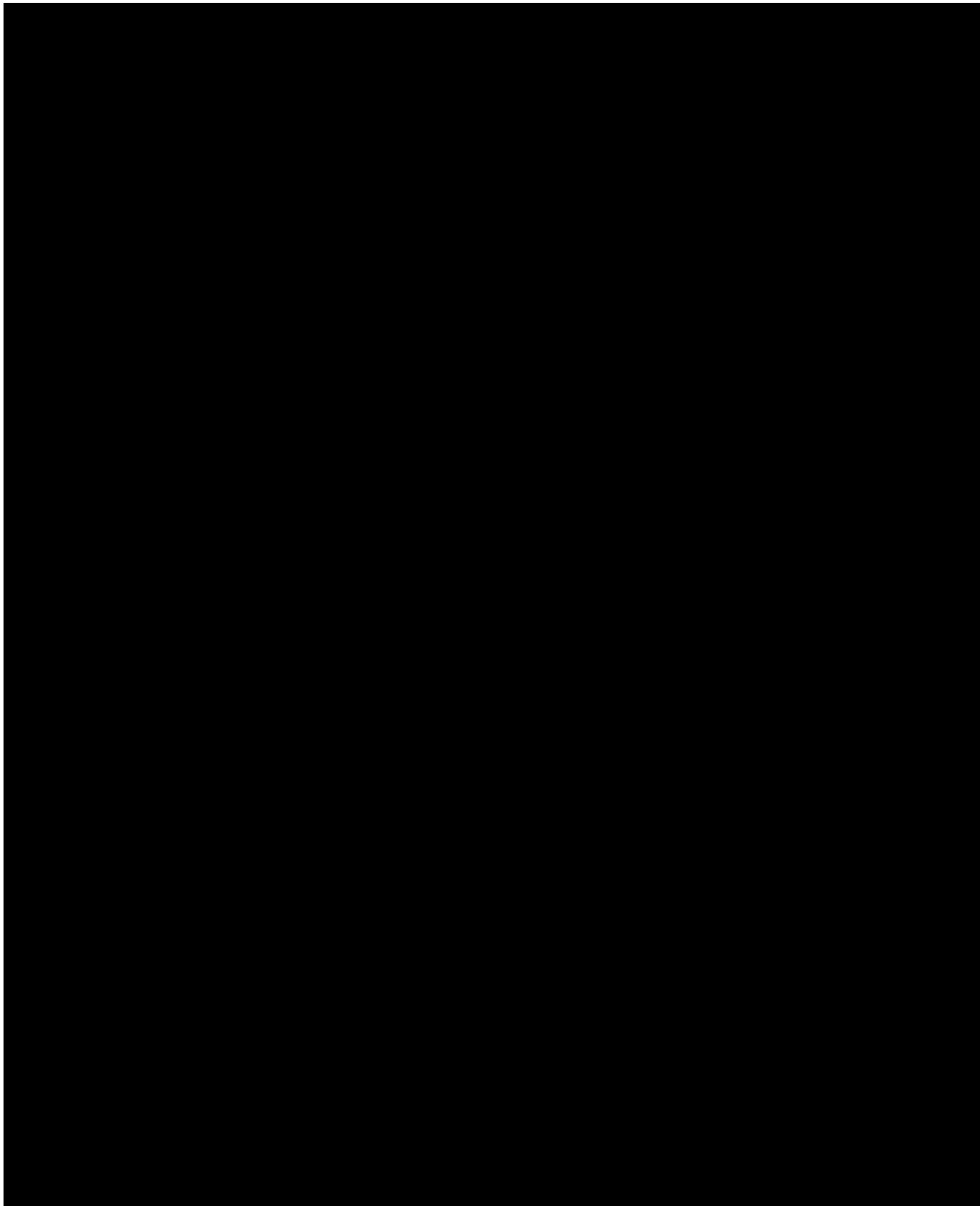


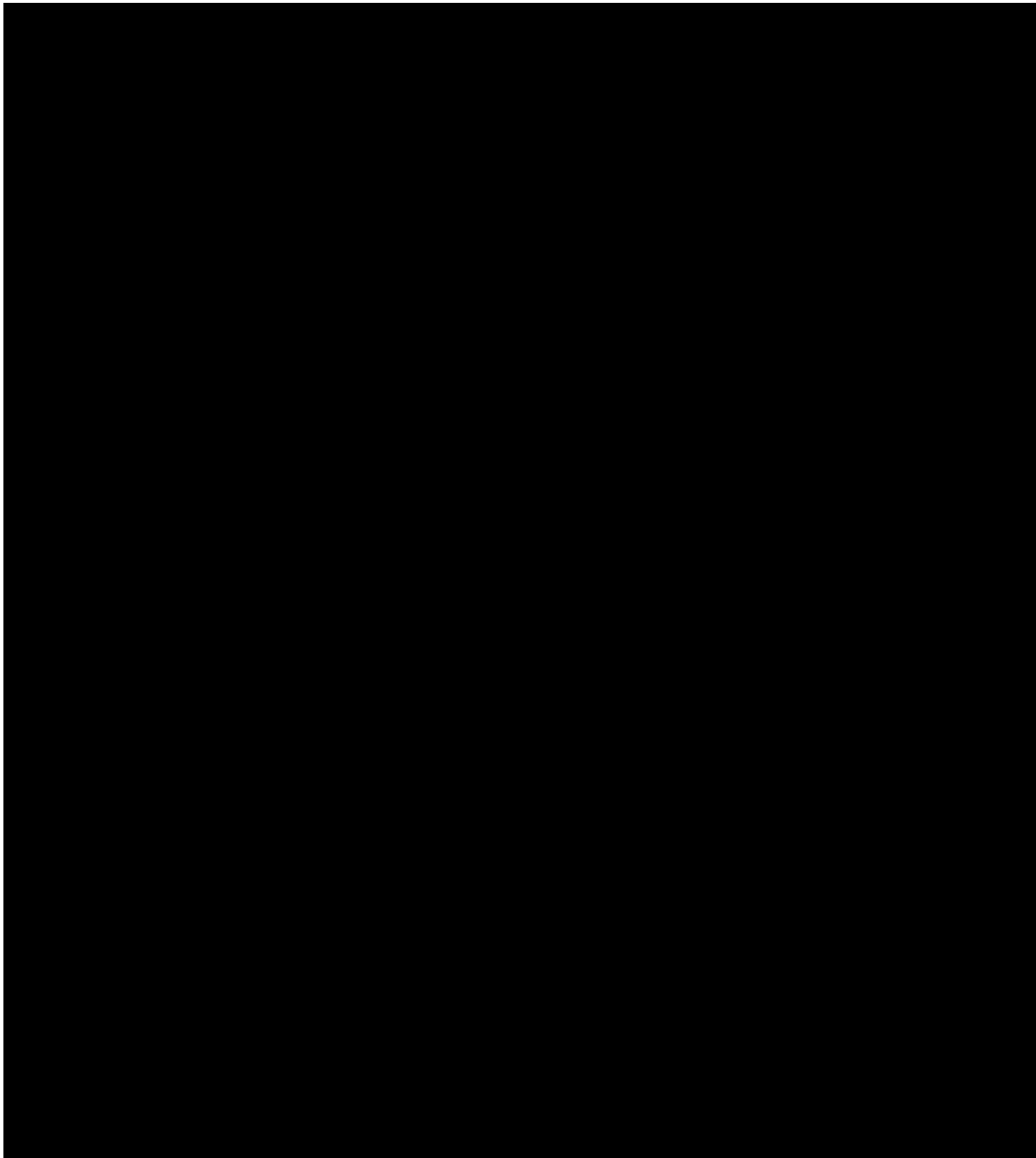
EXHIBIT BD

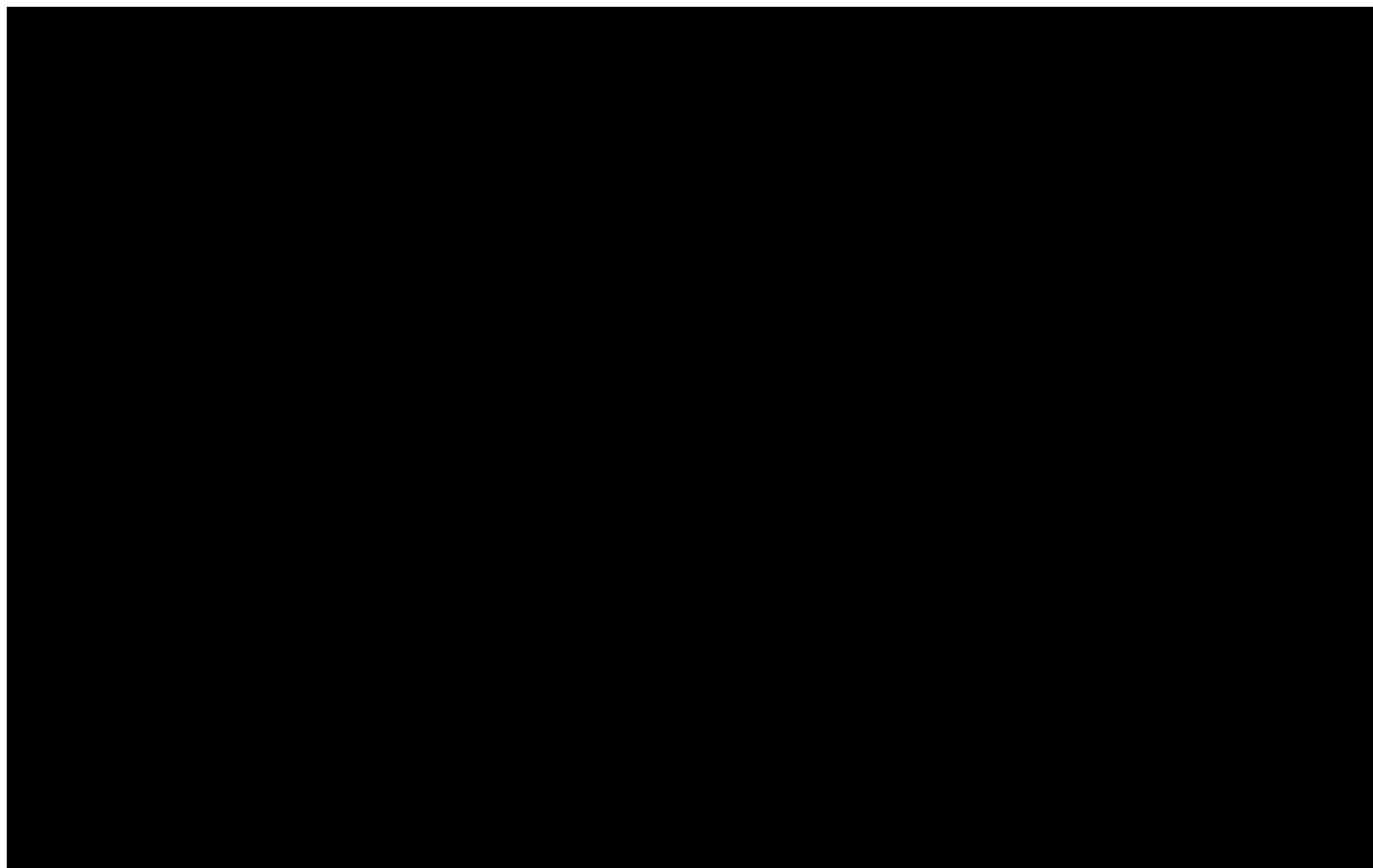


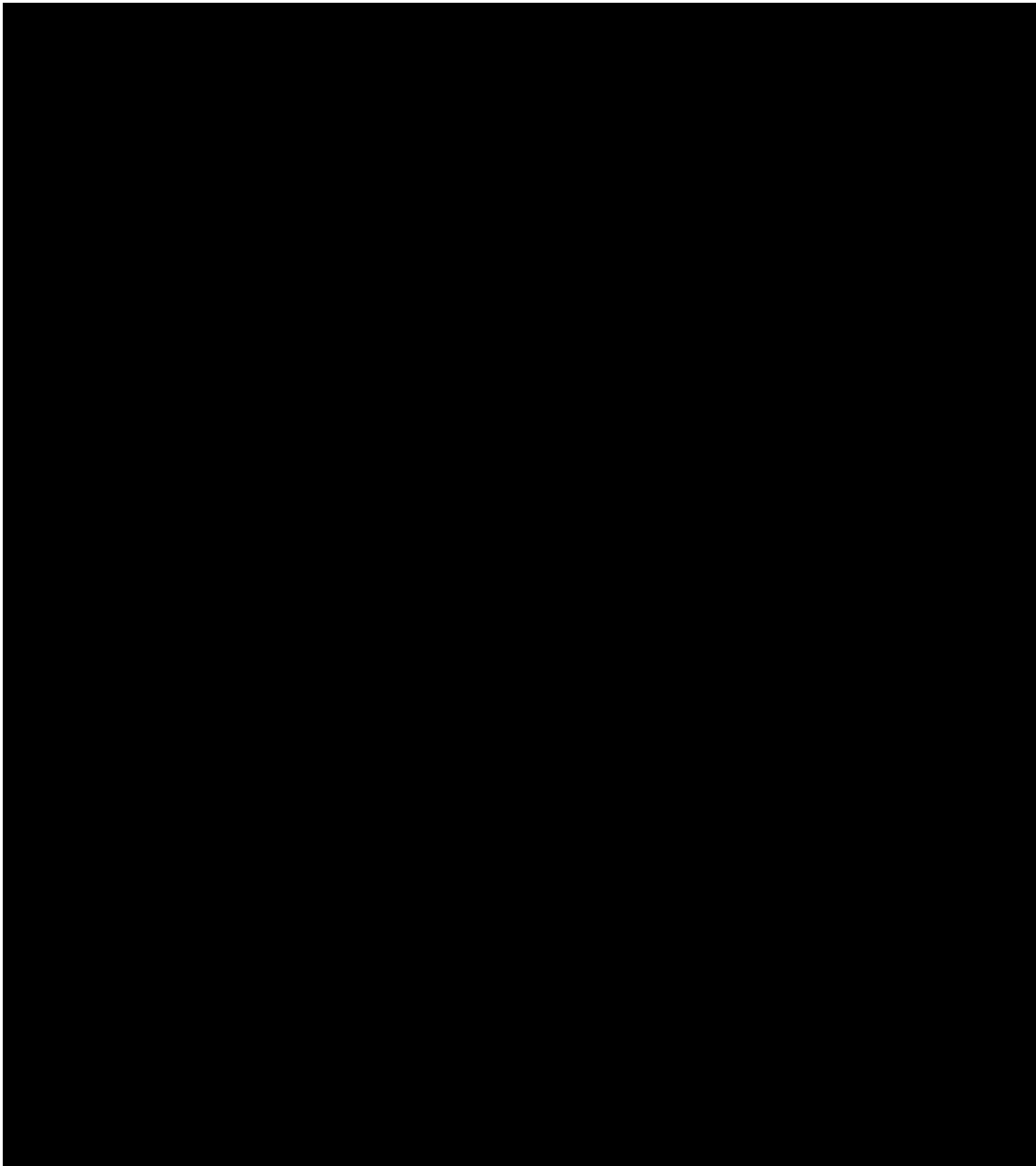












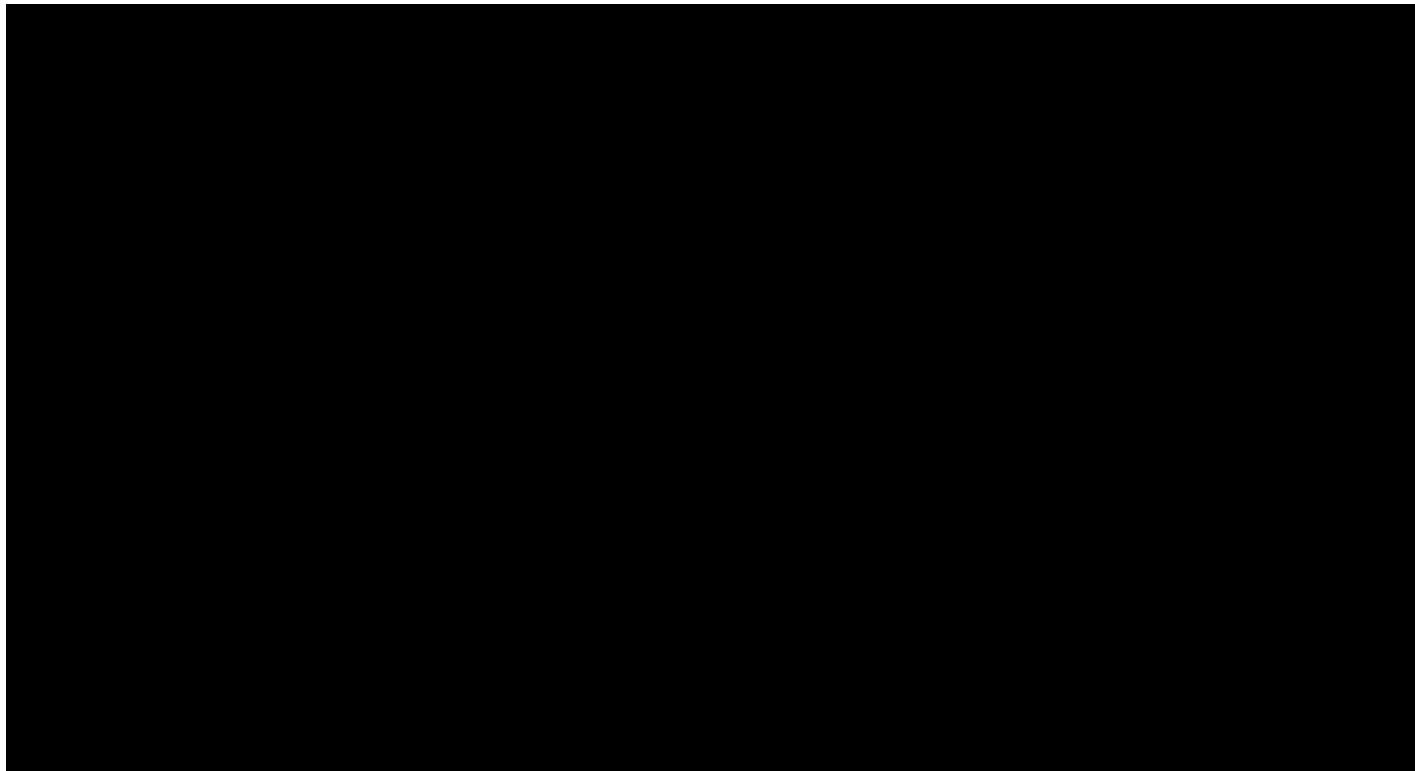


EXHIBIT BE

STATEMENT OF WORK II FOR ROSS BULK MEMOS

This Statement of Work II incorporates and is made pursuant to the October 15, 2015 Master Services Agreement ("MSA") by and between ROSS Intelligence, Inc. ("ROSS"), a Delaware corporation and LegalEase Solutions, LLC ("Contractor") a Michigan limited liability company.

1. Definitions: Terms and expressions not expressly defined in this Statement of Work, shall have the following meanings:
 - 1.1. "Case Law" means judicial decisions originating from a judicial or administrative body in the United States of America, or as otherwise prescribed in writing by ROSS and sent to Contractor.
 - 1.2. "Legal Research Question" means a question grounded in legal principles.
 - 1.3. "Memorandum or Memo" means a memorandum of law that answers a Legal Research Question.
 - 1.4. "Quote" means an independent paragraph excerpt from Case Law.
 - 1.5. "Reference List" means the list of Case Law included in the Memo.
 - 1.6. "Deficiency" means a reference quote that does not directly answer the ROSS question.
2. Additional Terms and Expressions: Additional capitalized terms and expressions have the meanings ascribed to them in the MSA.
3. Currency: Unless stated otherwise, all dollar figures in this Statement of Work are in United States dollars.
4. Term: Subject to the termination provisions of this Agreement, the term of this Statement of Work shall be for a period of three months commencing on September 19, 2017 and expiring on December 19, 2017 ("Initial Term"). Upon the expiration of the Initial Term, this Statement of Work shall renew with the prior written mutual consent of ROSS for successive three month periods ("Renewal Terms"), unless terminated pursuant to the terms of the Agreement. The terms Initial and Renewal Terms shall be collectively referred to as the "Term".
5. Description of Service:
 - 5.1. Contractor agrees to provide ROSS with bulk Memos. Contractor agrees to meet the expectations for performance as set forth in this Statement of Work. Contractor's attorneys will research topics and Legal Research Questions from any Federal or State jurisdiction in the United States, without regard to any legal decisions, draft Memos, and compile the Memos in the format approved by ROSS.
 - 5.2. Each Memo shall include a Legal Research Question and a Reference list with a target of at least four (4) and no more than six (6) Quotes.
 - 5.3. Two (2) to four (4) Quotes in each Memo shall contain either a "great" or "good" independent answer to the Legal Research Question. A "great" Quote is one that contains an answer to all essential elements of the Legal Research Question while a "good" Quote is one that contains an answer to most essential elements of the Legal Research Question. The Contractor shall strive for four (4) "good" or "great" Quotes per question. However, if

Contractor is only able to find 2 or 3 "good" or "great" Quotes, they shall only provide 2 or 3 "good" or "great" Quotes. Contractor shall strive to have more "great" than "good" Quotes.

- 5.4. One (1) Quote in each Memo shall contain a "topical" independent response to the Legal Research Question. A "topical" response is a response that answers and/or references limited components of a Legal Research Question but does not answer the essential elements of such Legal Research Question.
- 5.5. One (1) Quote in each Memo shall contain an "irrelevant" independent response to the Legal Research Question. An "irrelevant" response is a response that contains one or more keywords from the Legal Research Question but does answer and/or reference any elements of the Legal Research Question, either limited or essential.
- 5.6. Contractor shall label whether a Quote contains a response that is "great", "good", "topical" or "irrelevant" and double bracket and bold the specific component(s) of each such Quote that is "great", "good", "topical" or "irrelevant." Contractor shall also label which legal practice area each Quote falls under.
6. Changes: ROSS reserves the right to request changes, deletions, or additions as deemed necessary by ROSS and Contractor. ROSS' proposed changes shall become effective only by written agreement of Contractor.
7. Production/Delivery Schedule: Contractor agrees to draft ROSS questions and Memos pursuant to the Production Run schedule below. In the First Production Run of Memos, Contractor shall commence providing deliverables on October 19, 2017 and conclude on December 19, 2017, as outlined below. For the Subsequent Production Runs of Memos, Contractor shall provide 20,000 Memos in subsequent months to ROSS.

First Production Run

Delivery Date	Amount of Memos
October 19, 2017	5,000
November 19, 2017	10,000
December 19, 2017	10,000

Subsequent Production Run

Delivery Date	Amount of Memos
Month 1	20,000
Month 2	20,000
Month 3	20,000
Month 4	15,000

8. Fee: ROSS shall pay Contractor pursuant to the schedule below:

Reference Quotes	Price per Memo
------------------	----------------

4 Quotes + 1 topical and 1 irrelevant Quote	\$26.17
3 Quotes + 1 topical and 1 irrelevant Quote	\$24.55
2 Quotes + 1 topical and 1 irrelevant Quote	\$21.00

Contractor shall provide a 5% volume discount to ROSS for any Memo purchase over 25,000 and a 15% volume discount for a total order of 100,000 Memos.

9. Payment: ROSS shall pay Contractor in advance at the beginning of each month for the following 30 days of expected output at a minimum \$21.00 price per Memo (each, an "Advance Payment"). For clarity, the Advance Payment for the (i) first 5,000 Memos of the First Production Run due October 19, 2017 shall be \$105,000 and shall be made on September 19, 2017; (ii) subsequent 10,000 Memos of the First Production Run due November 19, 2017 shall be \$210,000 and shall be made on October 19, 2017 and (iii) final 10,000 Memos of the First Production Run due December 19, 2017 shall be \$210,000 and shall be made on November 20, 2017. For any Subsequent Production Run, the Advance Payment shall be \$420,000. If there is a difference between an Advance Payment amount and aggregate Memo cost during a Production Run pursuant to the Section 8 Fee schedule (the "Cost Difference"), Contractor shall provide ROSS a detailed accounting of such Cost Difference in a timely manner and ROSS shall pay such Cost Difference within seven (7) days receipt of such detailed accounting.
10. Delivery: Contractor shall deliver batched Memos via e-mail or FTP to ross@rossintelligence.com and via the ROSS Memo upload portal (the "Portal"). The Portal shall meet necessary specifications of speed and capacity to process daily batched Memo uploads.
11. Quality Assurance: Contractor shall ensure the Memos submitted follow the (i) quality control processes detailed in the LegalEase Solutions Quality Control Guide ("QCG") provided in Schedule A to this Statement of Work and the (ii) Quality Control Checklist provided in Schedule B to this Statement of Work. Contractor shall follow a staged quality control process. There will be 100% quality control for the first 2000 Memos, 75% for the next 10,000 Memos and 25% for the remaining Memos. If any of the Memos submitted do not meet the parameters prescribed in the QCG, ROSS shall inform Contractor of such Deficiencies within 14 days of receipt of the applicable Memos. If no such notice is received within the prescribed 14 days, the applicable Memos shall be deemed fully accepted by ROSS. A 15% penalty shall be charged to any Memo and/or batch of Memos that fail to meet the QCG requirements.
12. Reporting: Contractor shall email daily reports to ROSS which include the production totals, QCG results, and other requested information from ROSS.
13. Destruction of Memos: Contractor acknowledges that the Memos constitute Confidential Information and shall remove and destroy all Memos and copies of Memos in its

possession within sixty (60) days of each Production Run and shall concurrently confirm to ROSS that such removal and destruction has occurred.

14. Existing Agreements: This Statement of Work is ancillary to existing agreements, including, but not limited to the MSA and prior Statements of Work.

Date: September 15, 2017

ROSS INTELLIGENCE, INC.

By: 

Name: Andrew Arruda
Title: Chief Executive Officer

LEGALEASE LLC

By: 

Name: Tariq Hafeez
Title: President

Quality Control Guide for ROSS Intelligence

Drafting Questions, Preparing Responsive
Memorandum, and Quality Control
Procedures

LegalEase Solutions LLC



TABLE OF CONTENTS

Overview	2
Introduction	2
Audience	2
Objectives	2
Legal Disclaimer	3
The LegalEase Ross Team and Process	4
Attorneys	4
Quality Control Attorneys.....	4
Staged Quality Control Process	4
Production Expeditors	5
India and US Project Managers	5
ROSS Operations	5
The LegalEase ROSS Process Flowchart.....	6



Overview

Introduction

The LegalEase Solutions Quality Control Guide ("QCG") is the primary quality assurance resource and playbook for our attorneys. This QCG provides all the tools and resources needed for the drafting and delivery of ROSS Intelligence memos.

Audience

The intended audience for this guide is our attorneys who prepare Ross memos. Additionally, this guide may be utilized by ROSS to review our internal process.

Objectives

This guide:

- Identifies clear guidelines for attorneys to follow when designing, developing, and researching, drafting, and delivering ROSS memos.
- Describes quality control standards for ROSS memos.
- Describes quality control procedures and processes set in place for ROSS memo production.



Legal Disclaimer

This Quality Control Guide includes proprietary, confidential, and/or trade secret information. LegalEase considers this information to be a trade secret not subject to disclosure.



The LegalEase ROSS Team and Process

We have organized a comprehensive team for this project. Leading the team for ROSS operations are Teri Whitehead, VP of Global Strategy and Gayathri Rajeev, Director of Operations in India. Teri and Gayathri will oversee operations and are available anytime to address and resolve any potential concerns.

Attorneys. Our team of attorneys will research topics and questions, draft the memos, and compile the memos in the ROSS approved format. We will ensure that our attorneys follow this QCG for drafting memos and utilize our internal associate work product checklists. The steps include:

- i. Using our LegalEase's creative process, to produce ROSS questions.
- ii. Research answers to questions.
- iii. Draft ROSS memorandum.

Quality Control Attorneys. We have allocated a minimum of 5 separate QC attorneys to independently review memos, ensuring that ROSS standards are met. These attorneys have a minimum of 3 years' experience in these positions. The QC team will be expanded as needed per the scope and requirements of this project. The QC team will follow the QC checklist setting out the steps to be followed in completing the process. These steps include:

- i. Review and confirm the grammar, question format, and citations.
- ii. Confirm and review short answer and legal analysis.
- iii. Review reference quotes for relevancy.
- iv. Confirm case law.
- v. Advise associates of errors and design action plan to avoid future errors.

Staged Quality Control Process. Our QC attorneys will follow LegalEase's staged quality control process. We have used this process with success on other large accounts with over 50,000 documents.

First Stage:

100% QC of 2000 Memos. Our QC attorneys will QC 100% of the first 2000 memos.

Second Stage:

75% for the next 10,000 memos. Our QC attorneys will QC 75% of the next 10,000 memos.

Third Stage:

25% for the remaining memos. Our QC attorneys will QC 25% or more of the remaining memos.



Production Expeditors. Our dedicated ROSS production expeditors will comply and follow ROSS' process on delivery, including the portal upload, data tracking, and logistics. These steps include:

- i. Validate question originality.
- ii. Upload memorandum to ROSS dedicated portal.
- iii. Update internal LE production tracking sheet.
- iv. Email production totals of attorneys and QC attorneys to Project Managers.
- v. Update internal exception error tracking sheet.
- vi. Update ROSS' completion tracking sheet.

India and US Project Managers. We have assigned to ROSS, three project managers. Our project managers will guarantee and ensure ROSS quality and processes. Having project managers in different time zones will provide round the clock attention and access.

The role of the PM's include:

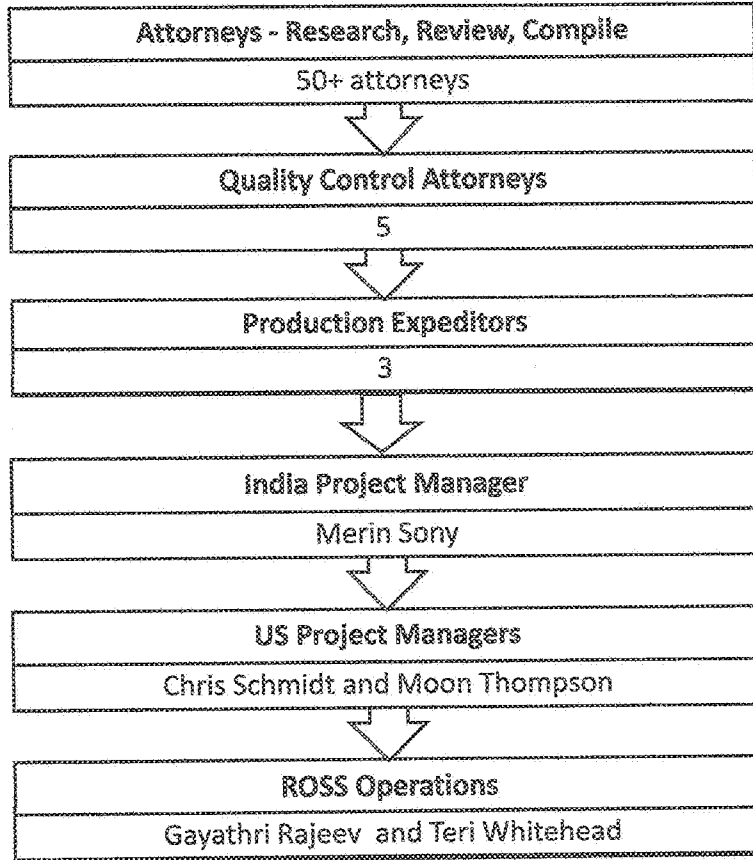
- i. Review production of attorneys, QC attorneys, production expeditors.
- ii. Daily review protocol and process for efficiencies following LE model theory of constraints.
- iii. Address any concerns.
- iv. Email daily reports to LegalEase Operations detailing production, legal topics addressed, upload process production, improved efficiencies, and QC results.

Ross Operations. Teri Whitehead and Gayathri Rajeev will oversee all aspects of this project. Teri and Gayathri's role includes the following:

- i. Address any concerns.
- ii. Email daily reports to the ROSS team providing production totals, QC results, and other requested information.
- iii. Host daily conference status calls with the ROSS Production team.



The LegalEase ROSS Process Flowchart



Document ID : ROSS Bulk QCC
Date of Issue : 07.08.2017
Periodic Review : 09.15.2017
Revision No :

Quality Control Checklist for ROSS Intelligence

LegalEase Solutions LLC

Document ID : ROSS Bulk QCC
 Date of Issue : 07.08.2017
 Periodic Review : 09.15.2017
 Revision No :

QUALITY CONTROL CHECKLIST FOR ROSS BULK MEMOS

Attorney - ROSS Intelligence Checklist

Description	Completed
1. Draft ROSS questions following LegalEase Creative Process.	
2. Research questions using online resources and accounts.	
3. Label cases as great, good, topical, and irrelevant.	
4. Confirm that great, and good quotes answer the question directly.	
5. Add topical and irrelevant cases.	
6. Confirm that the topical and irrelevant cases meet the criteria.	
7. Confirm grammar correct throughout memo.	
8. Confirm the font and space of the memo.	
9. Follow file name convention.	

Review Attorney - ROSS Intelligence Checklist

Description	QC 1	QC 2
Question should not be state specific.		
Grammar check of question.		
Quotes to be labeled correctly. GREAT — must contain all essential elements of the question. GOOD — contains most of the essential elements of the question.		

Document ID : ROSS Bulk QCC

Date of Issue : 07.08.2017

Periodic Review : 09.15.2017

Revision No :

	TOPICAL – foundation quote, background information. IRRELEVANT– has no reference or relevance.		
	Should label as Great Case 1, Great Case 2, and not Great Quote.		
	Bracketed language must answer question. Bracketed language may be up to a paragraph. If necessary, you can double bracket separate sentences. Bracketed language must be a sentence. Not just two words.		
	Double Brackets, and Content in Bold.		
	No red squiggly line.		
	Confirm reference quote. Ensure Topical quote and Irrelevant quotes are added.		
	Smartsheet updates.		
	Double check the Form - Double Brackets for Quotes. No highlights.		
	Memo number.		
	Memo saved in correct format – naming convention.		

EXHIBIT BF

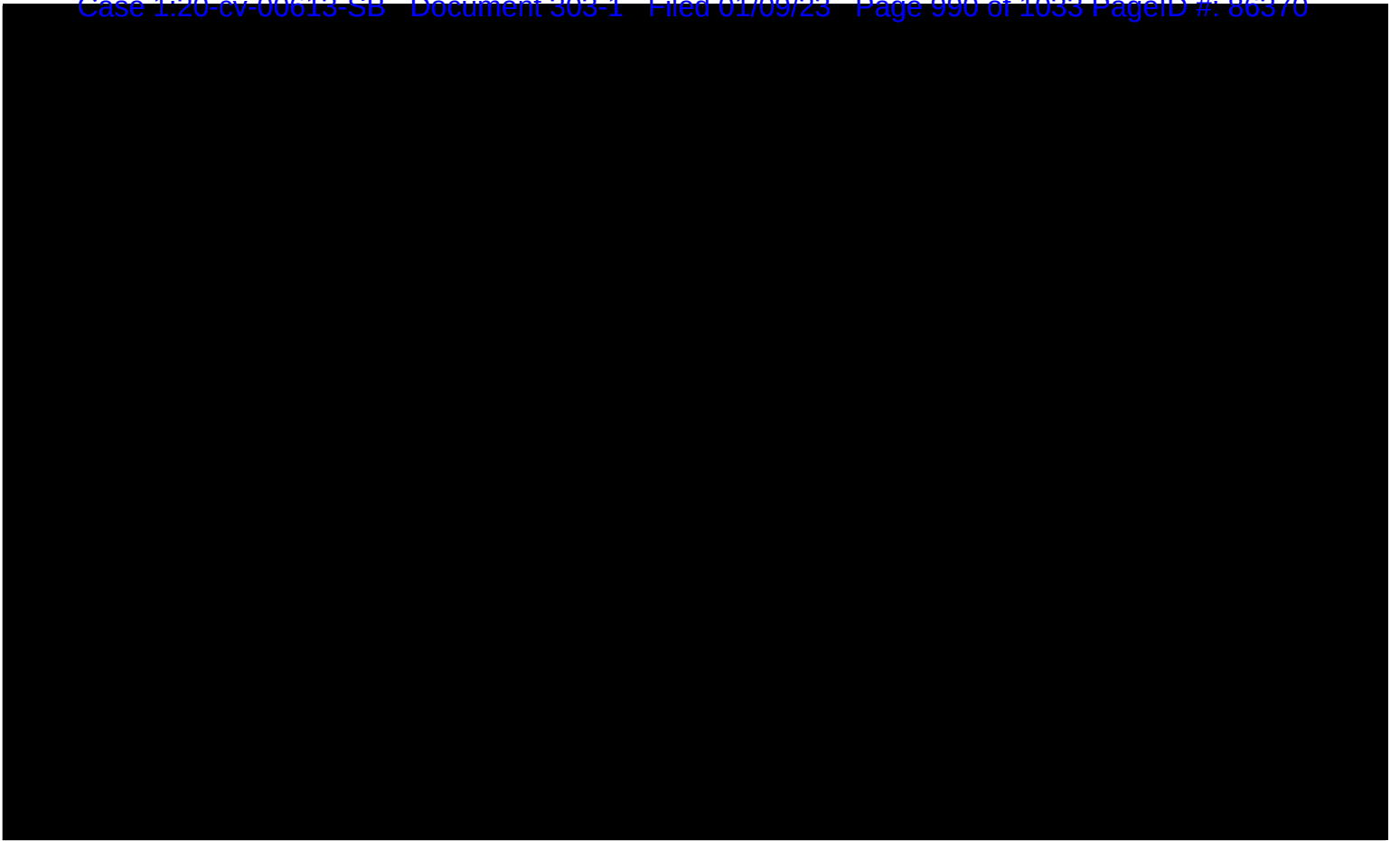
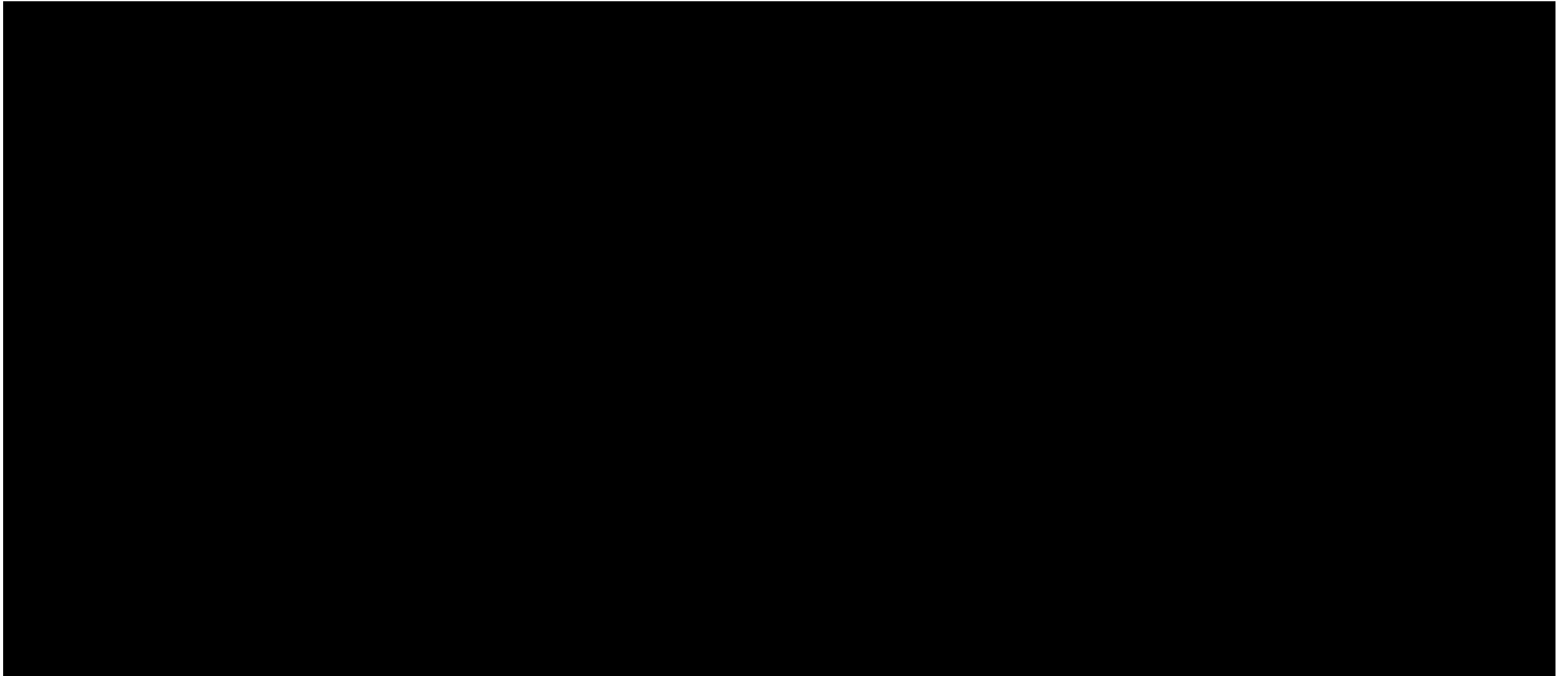
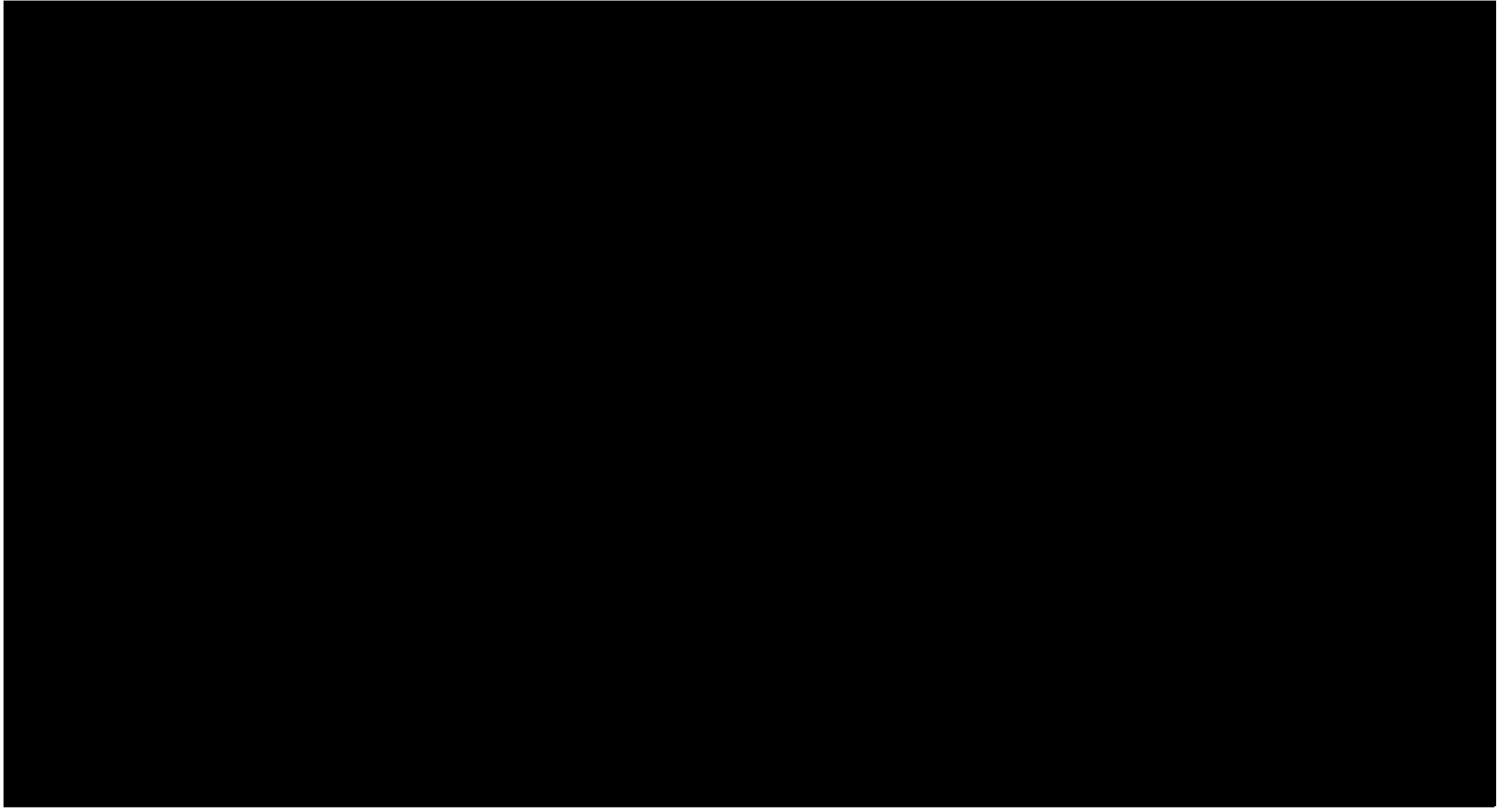
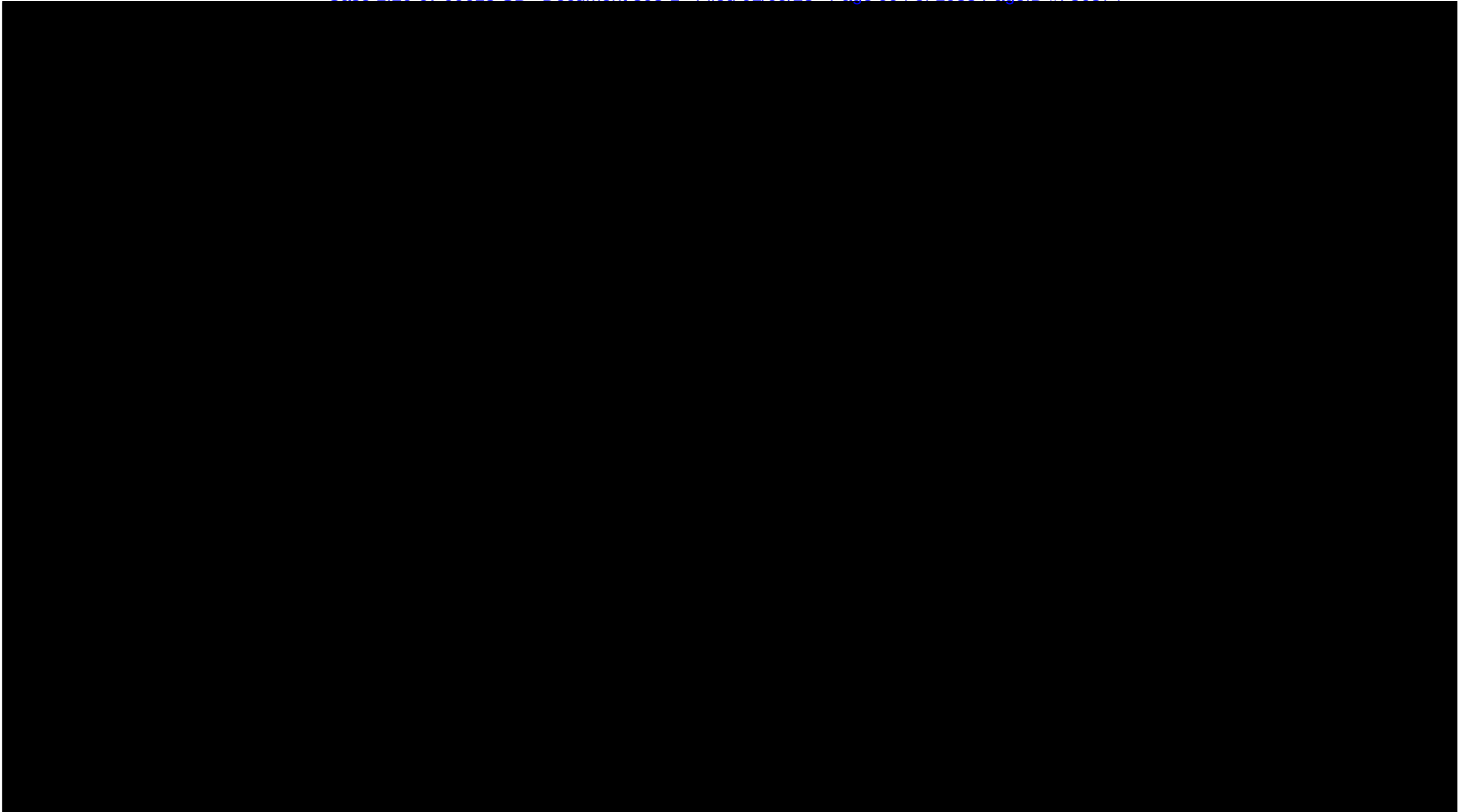


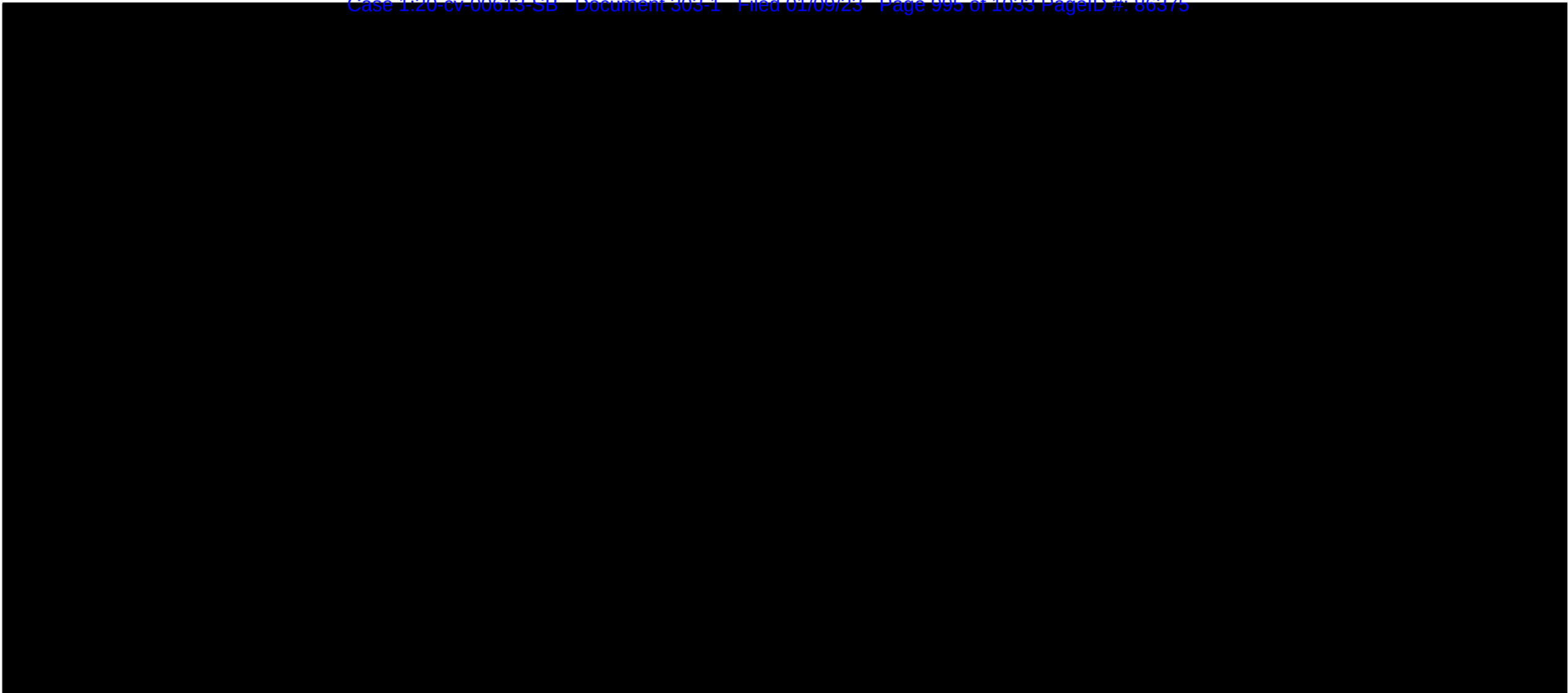
EXHIBIT BG

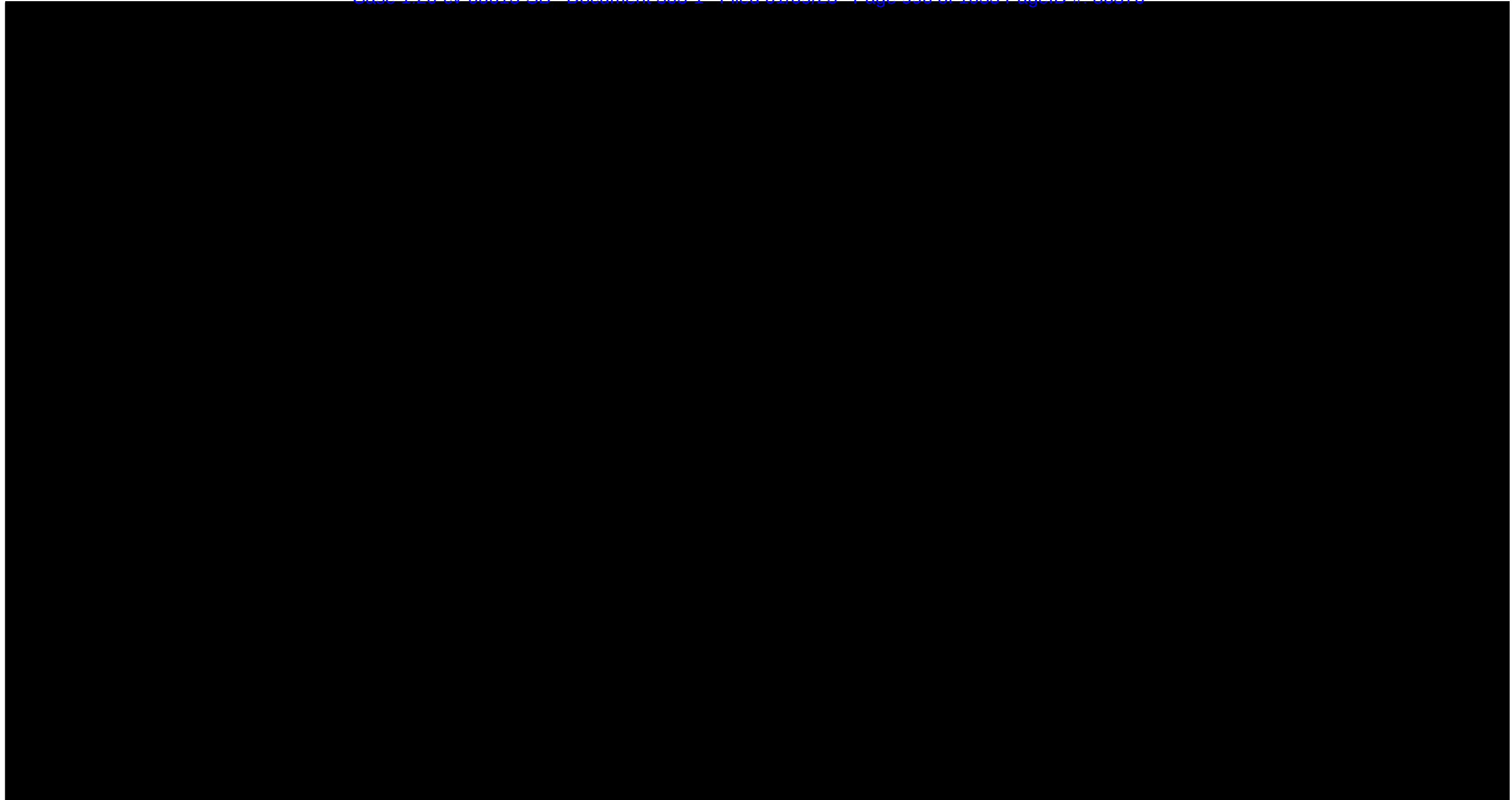
CONFIDENTIAL

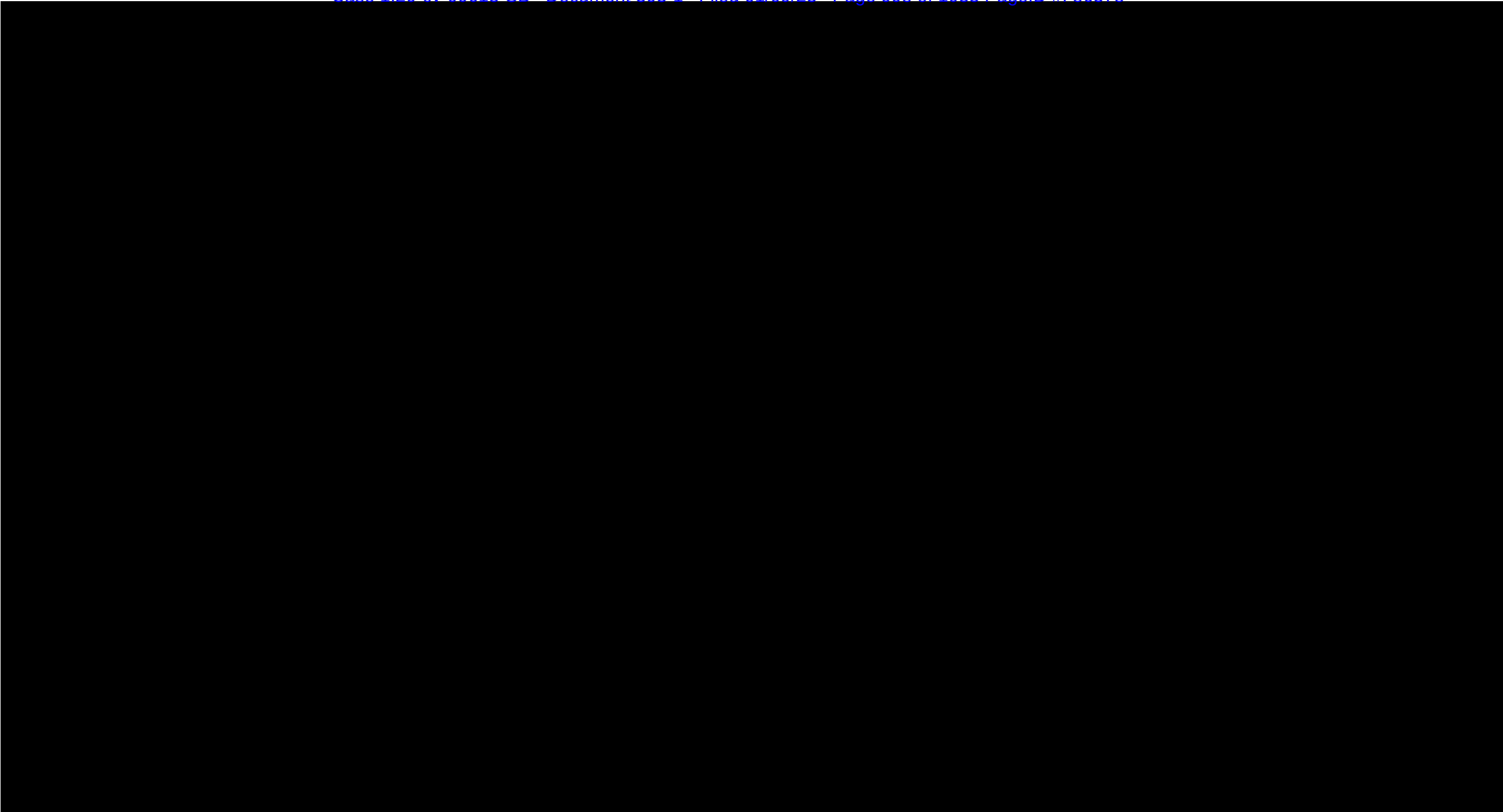


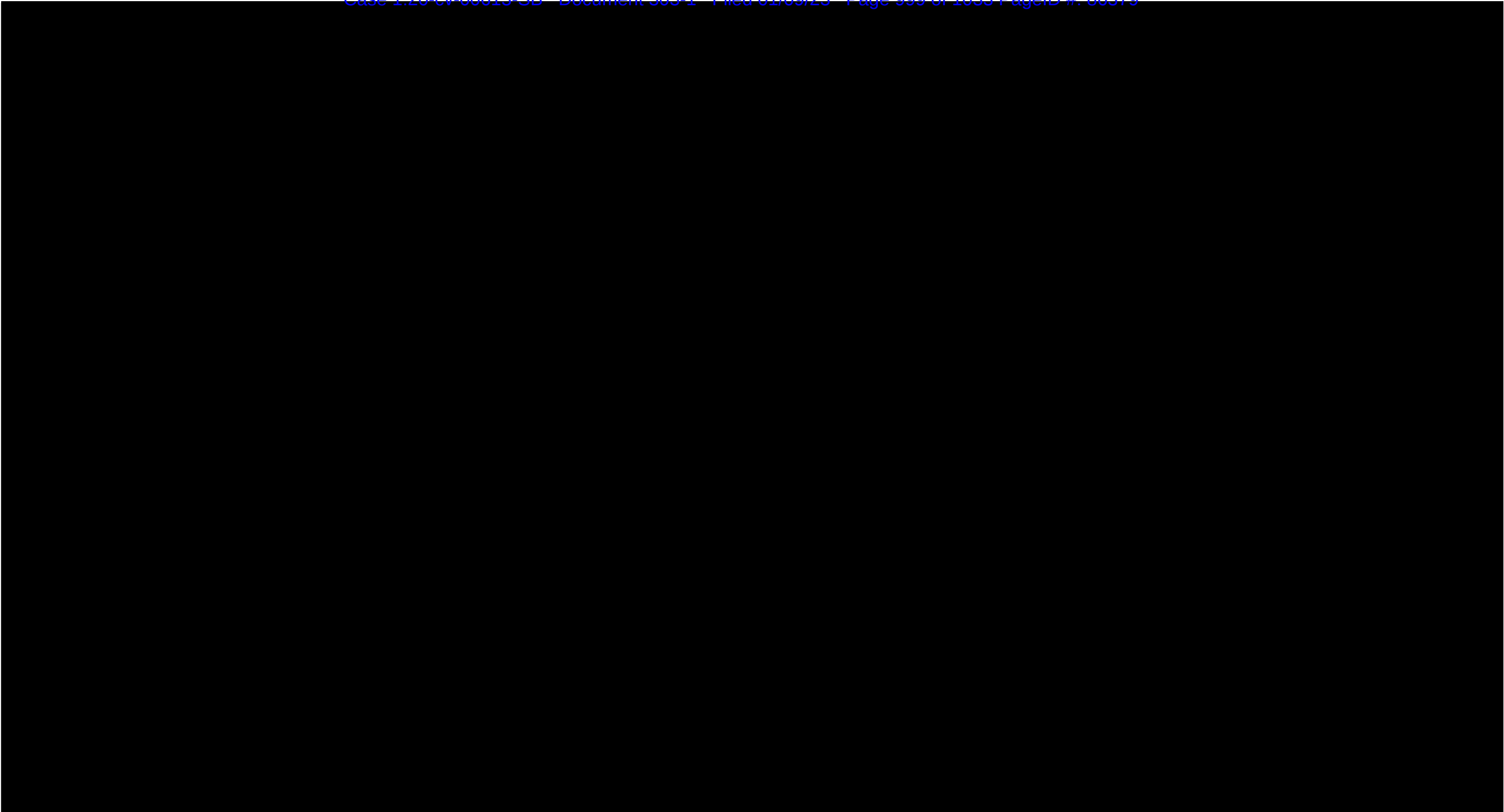


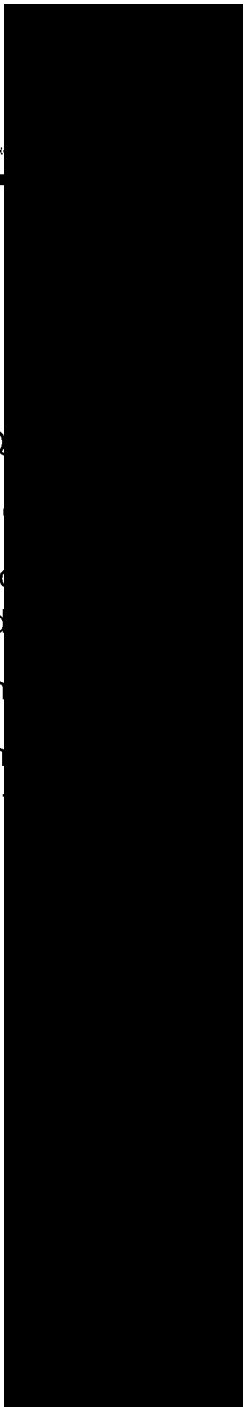
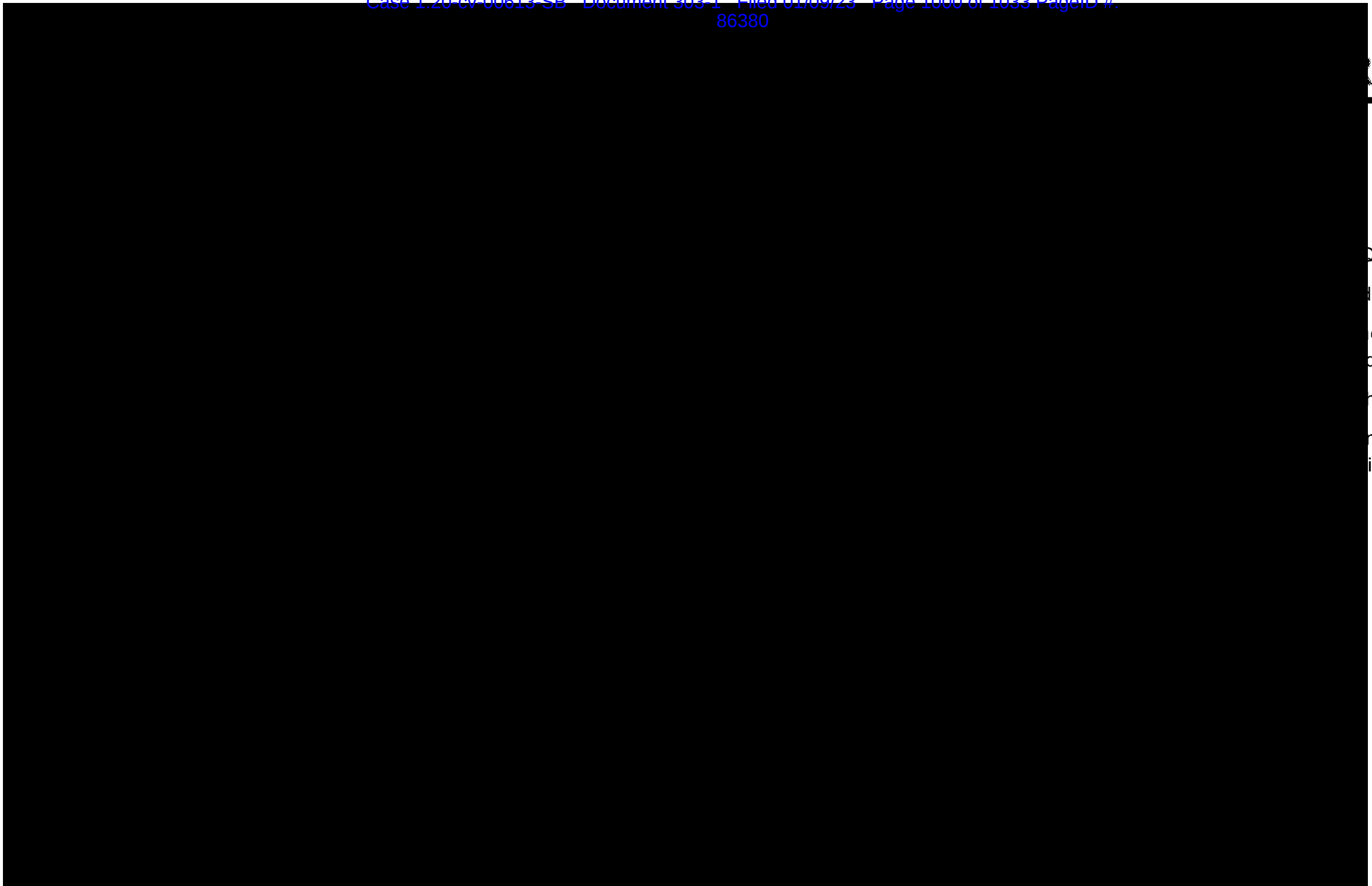


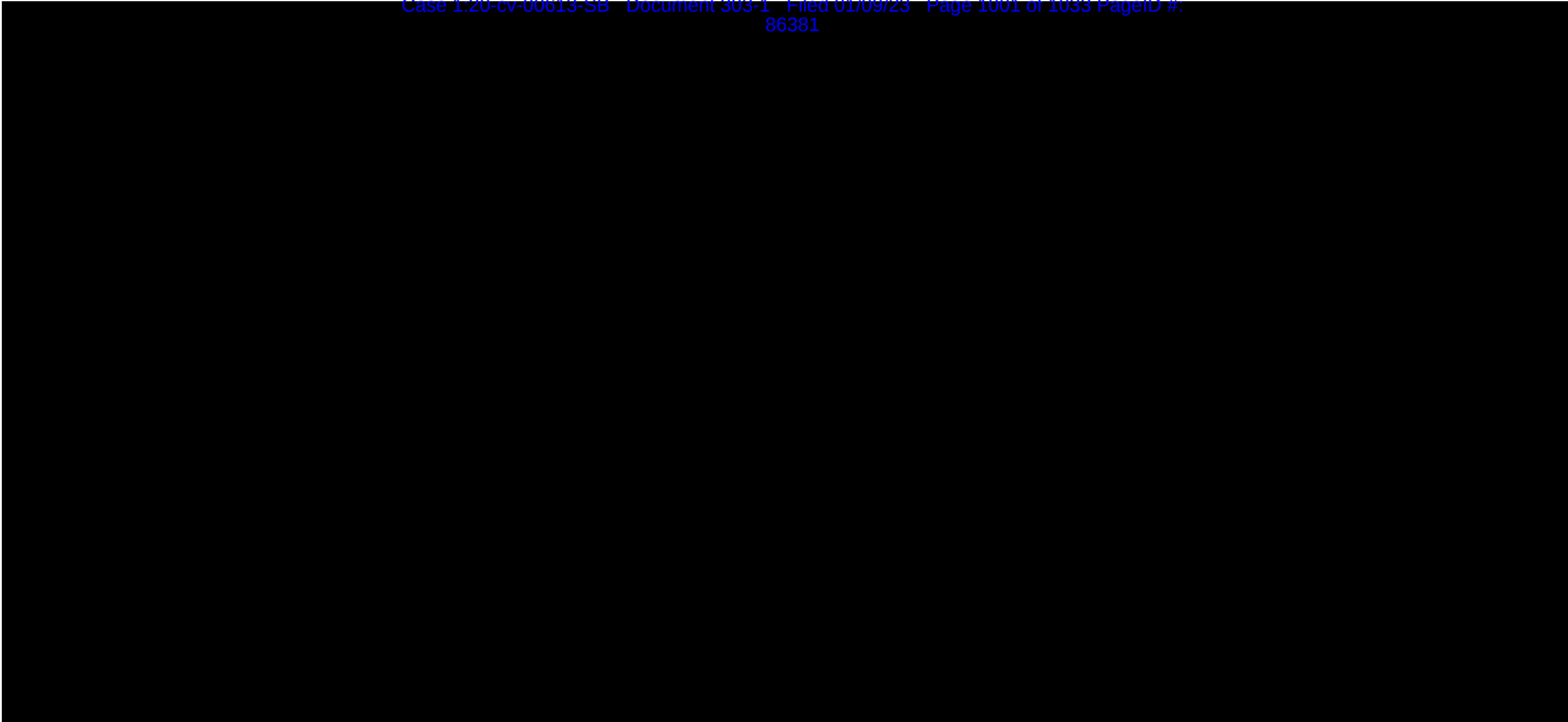


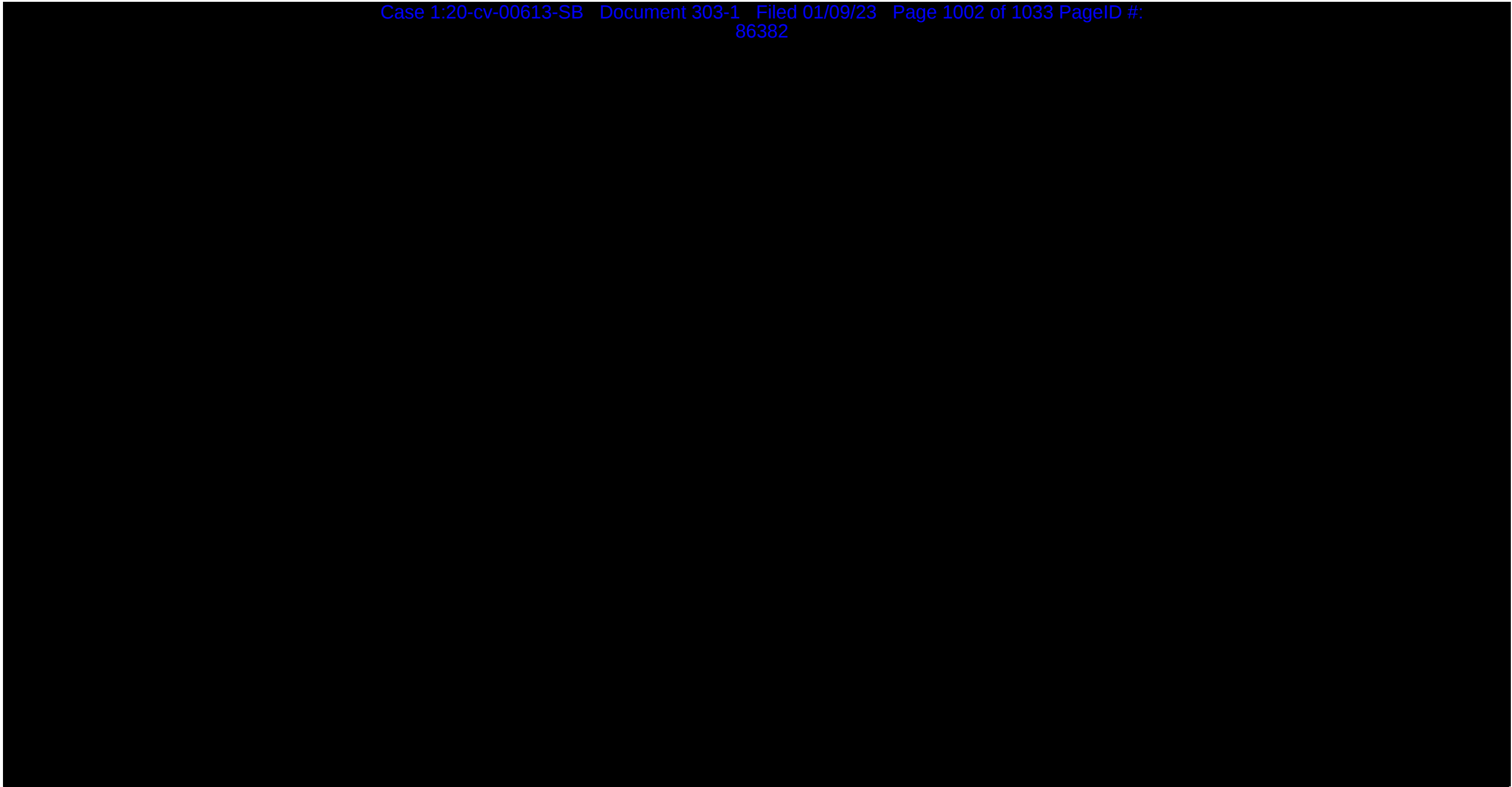


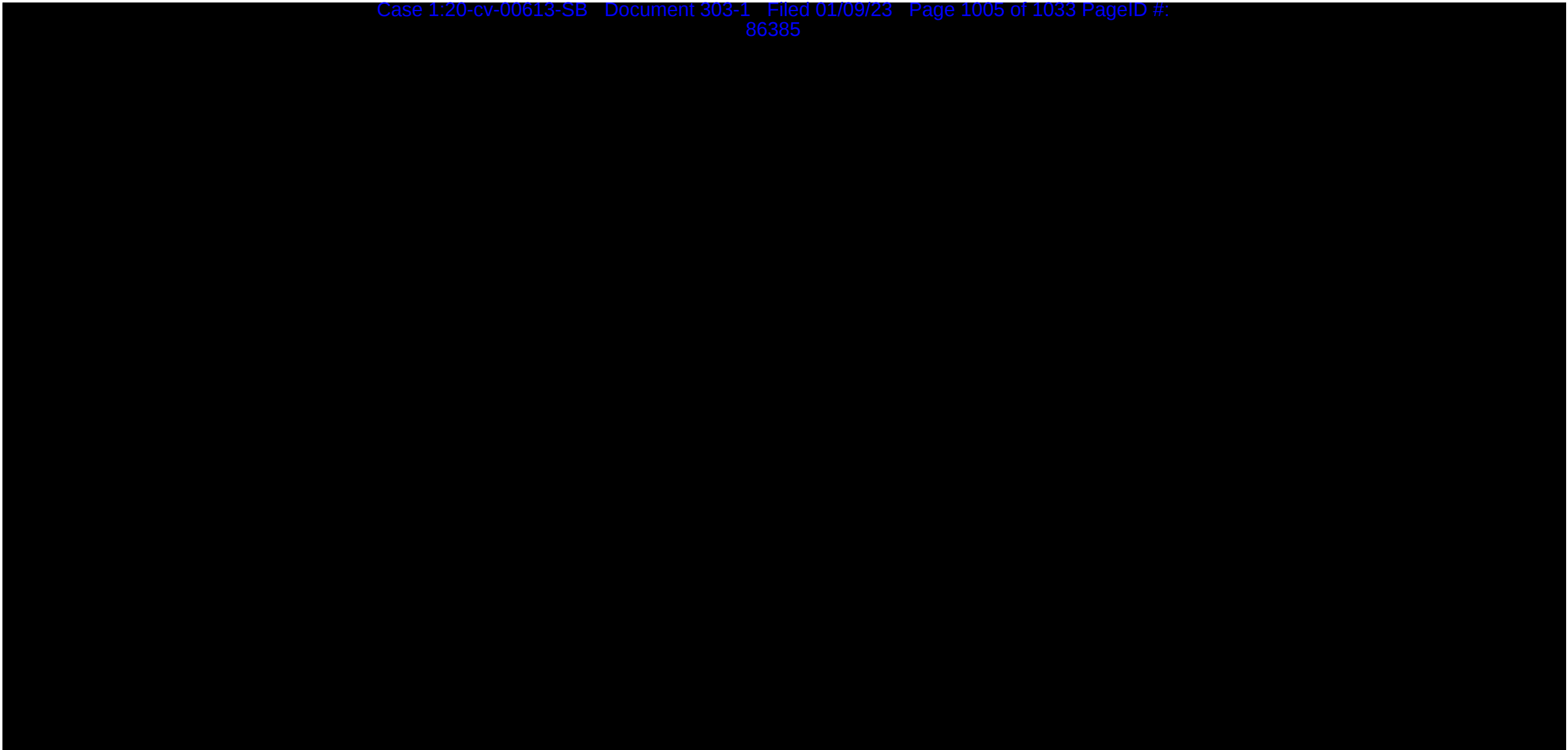


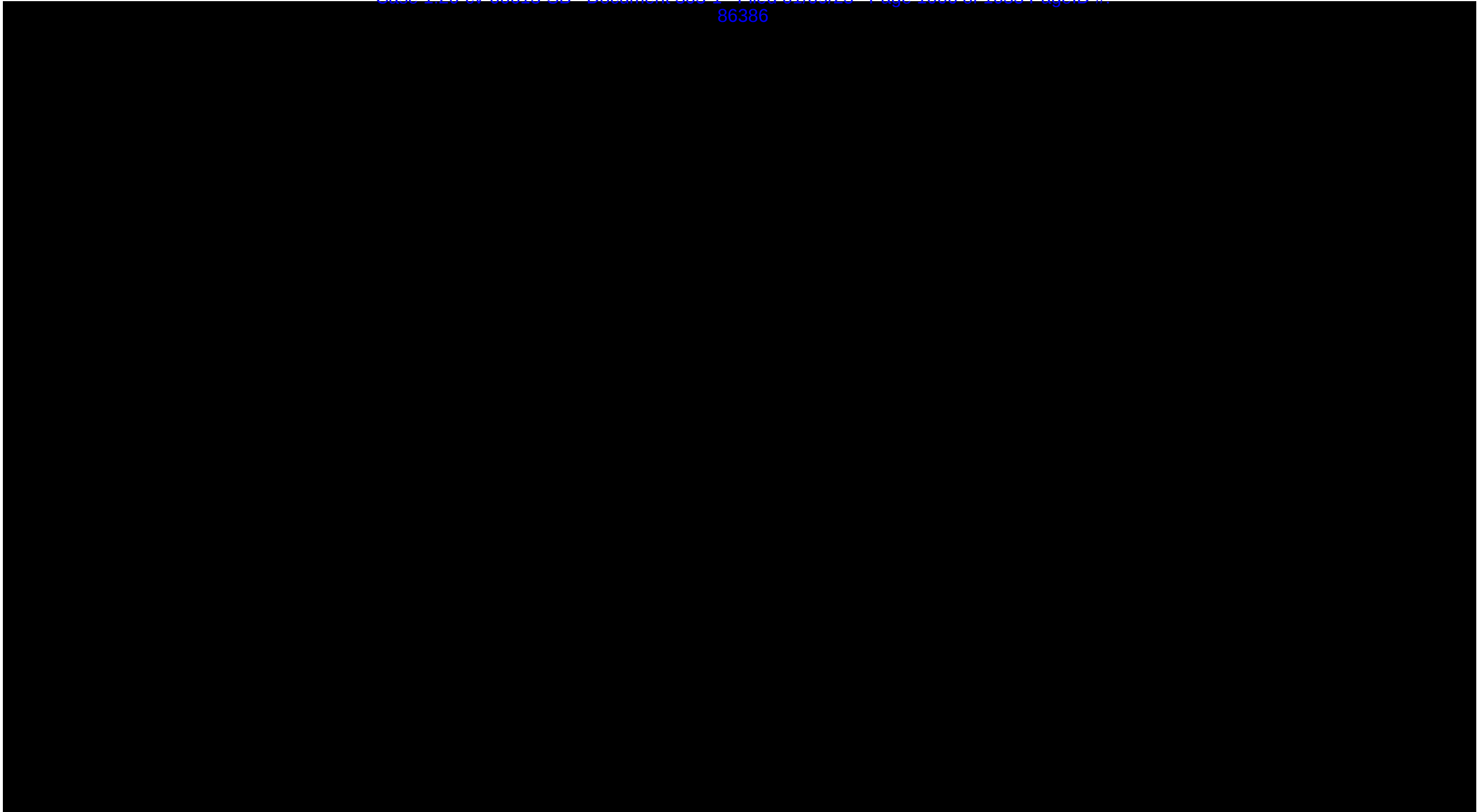


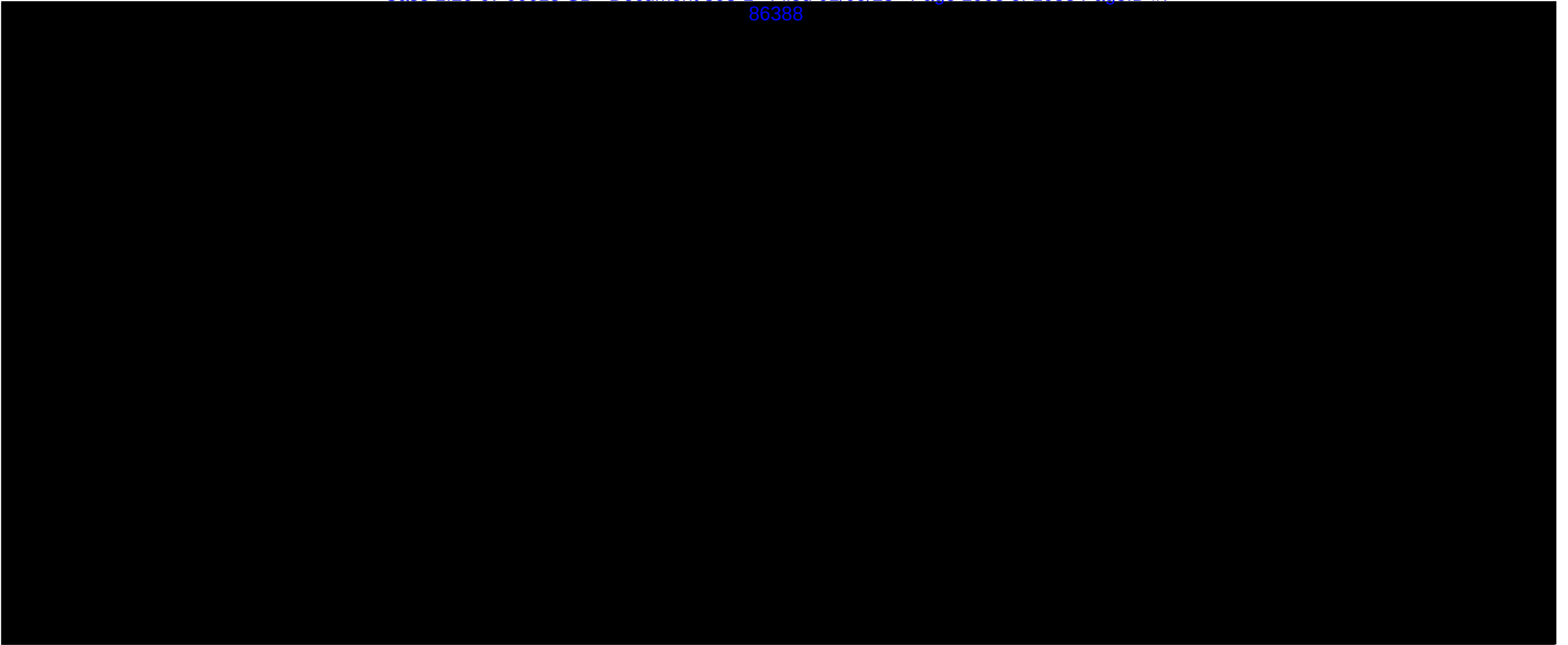


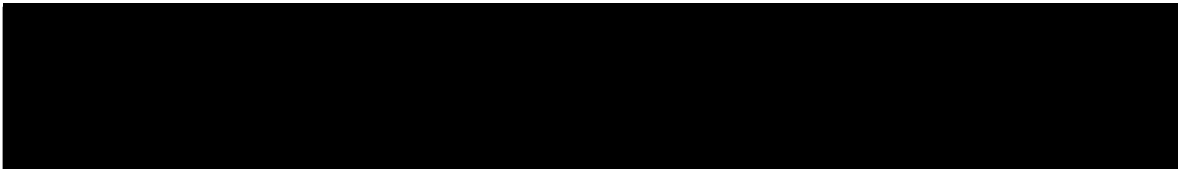
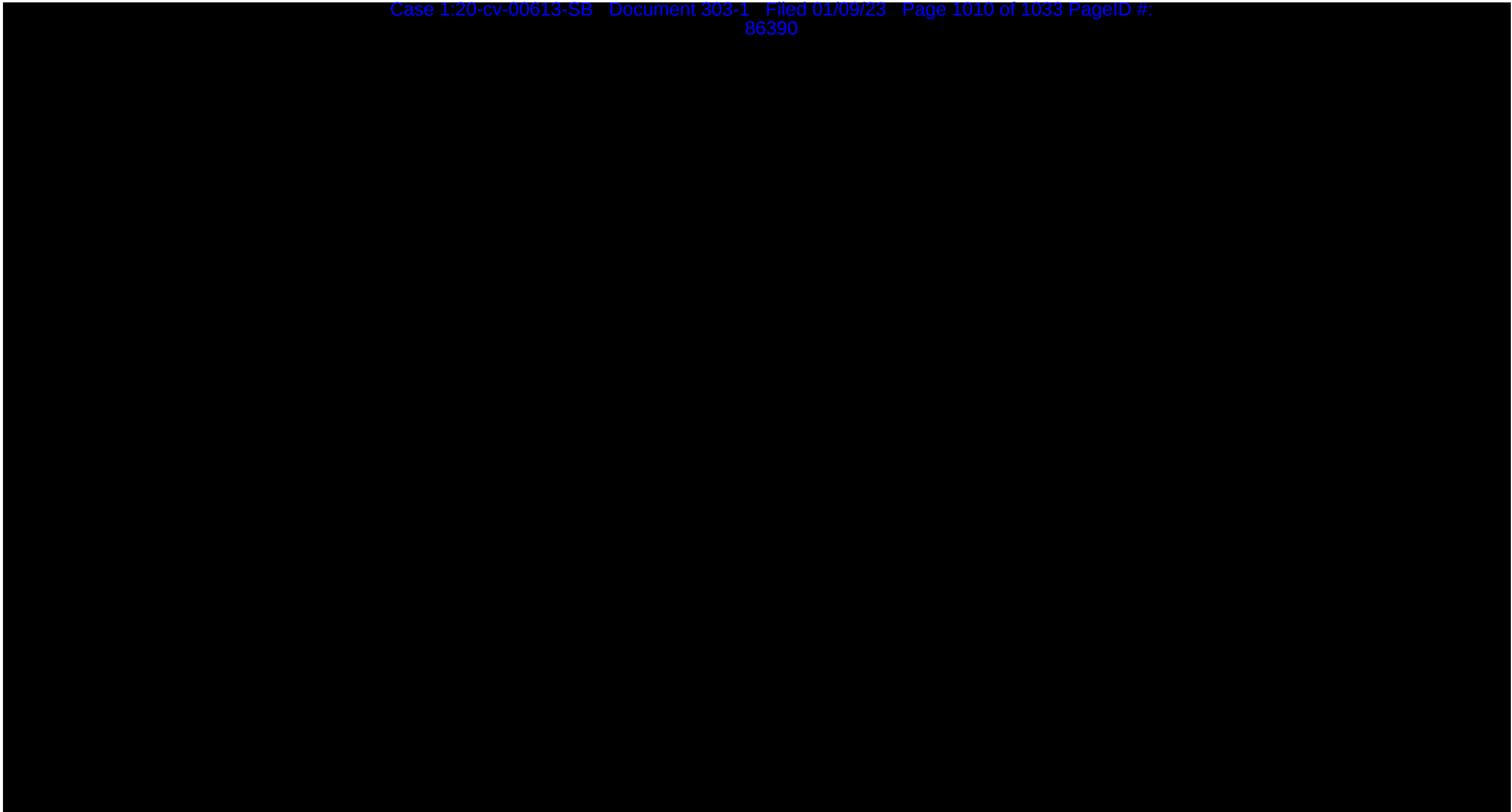


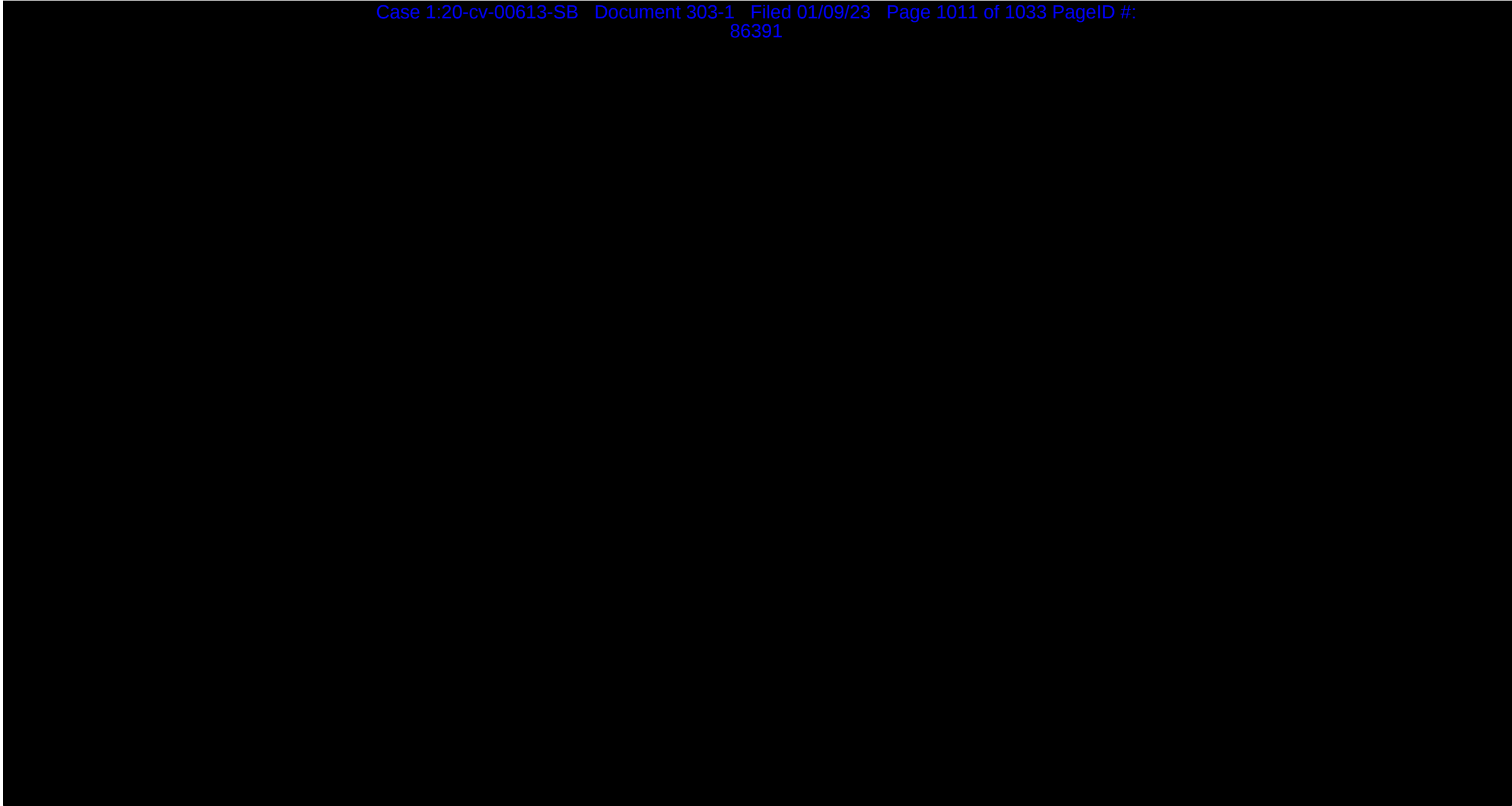


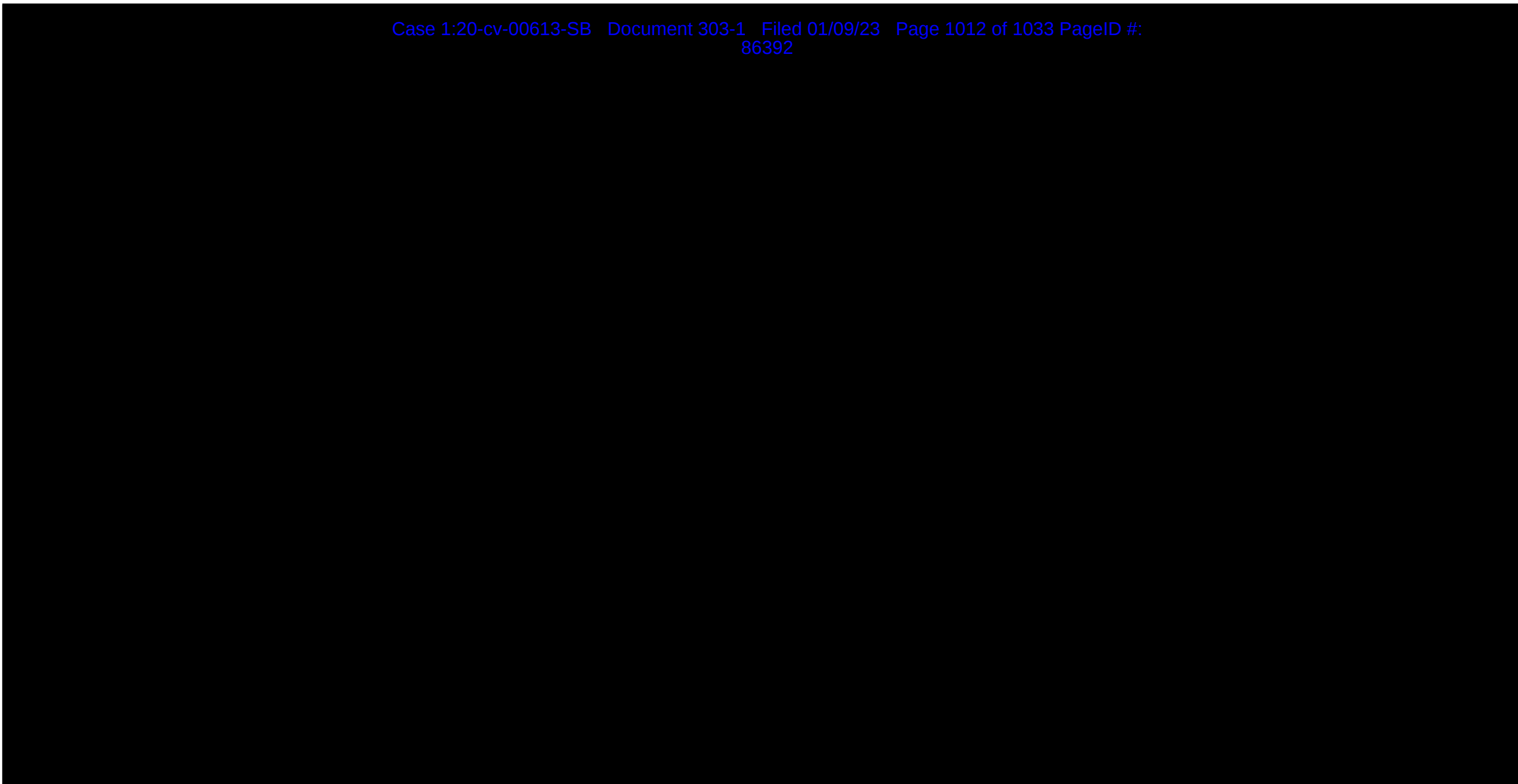


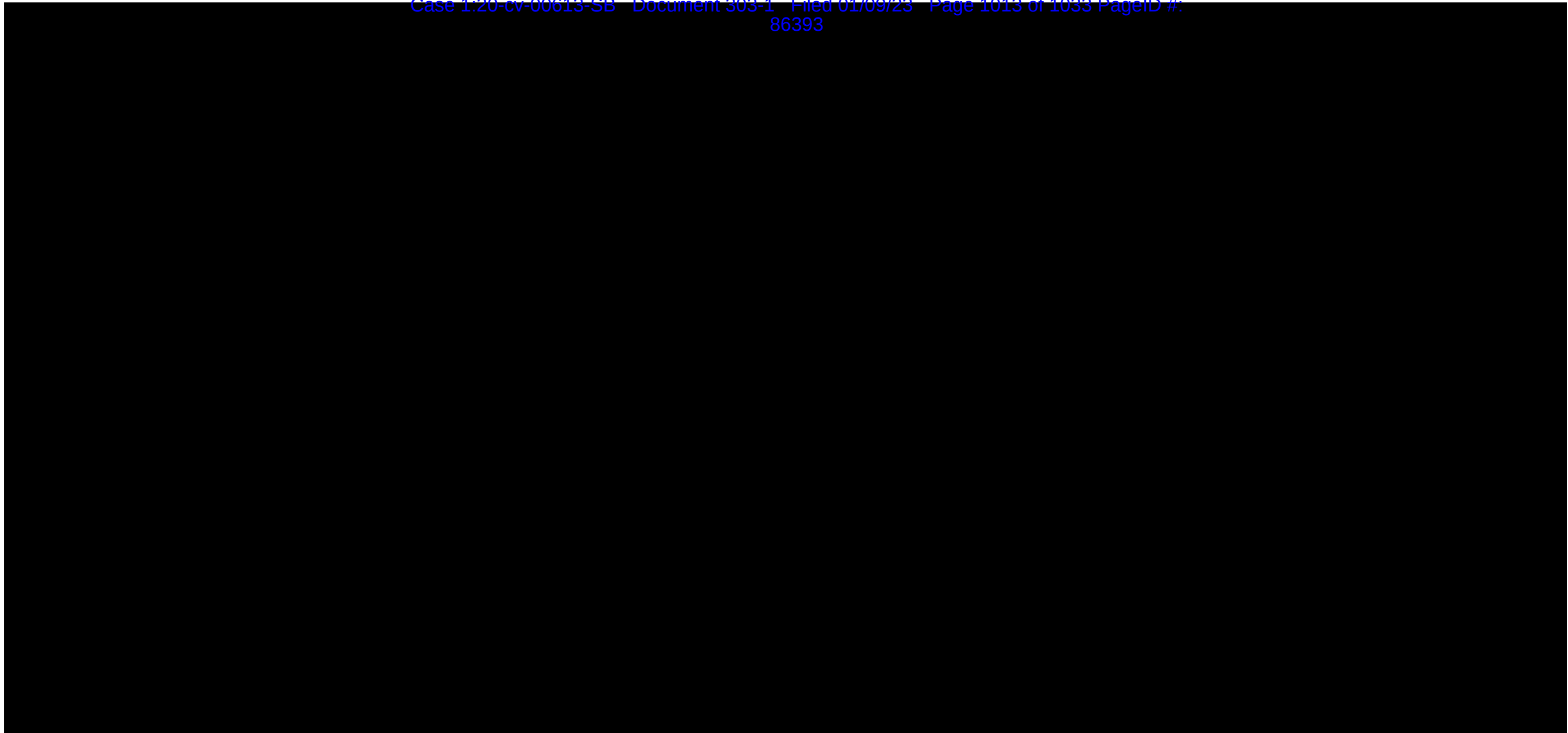


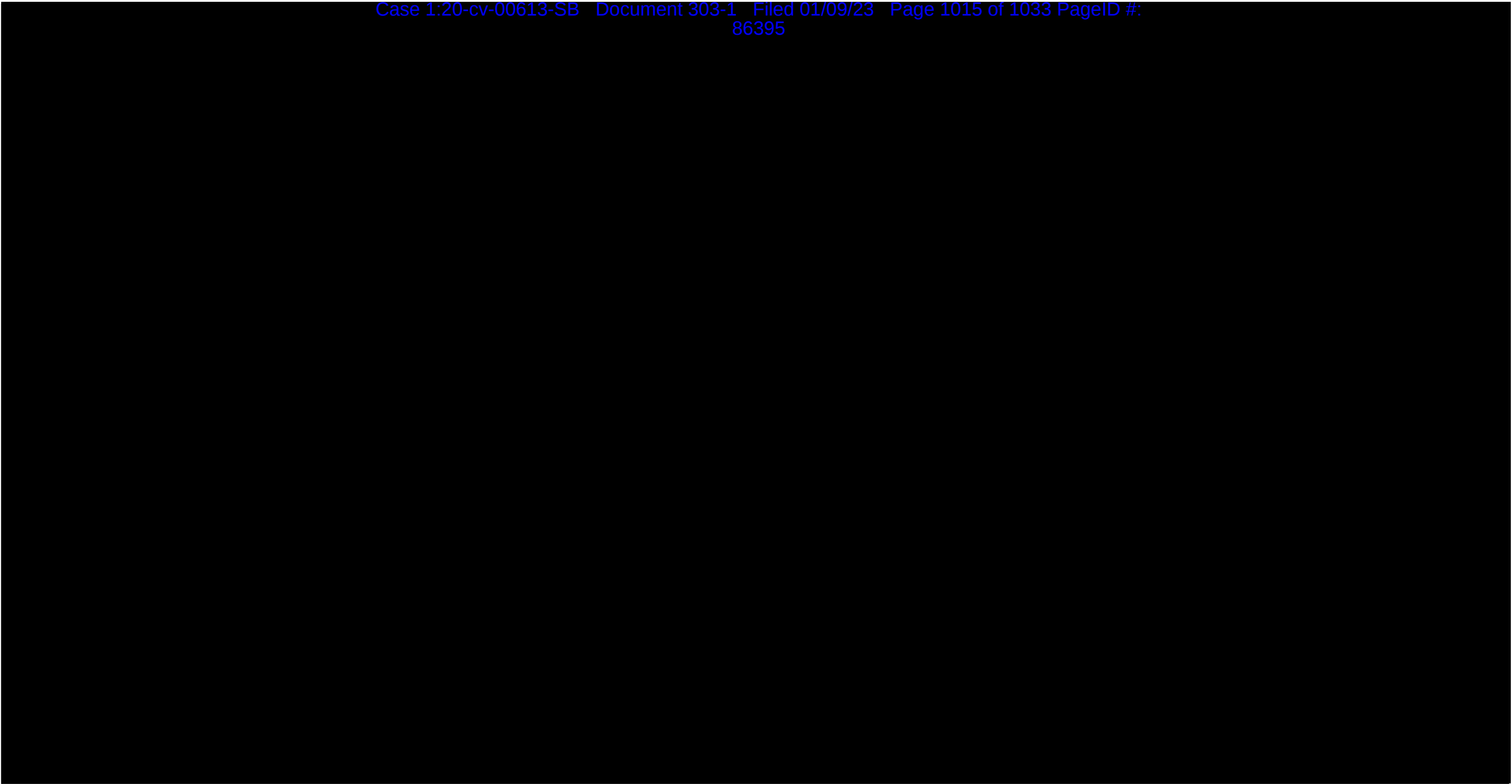


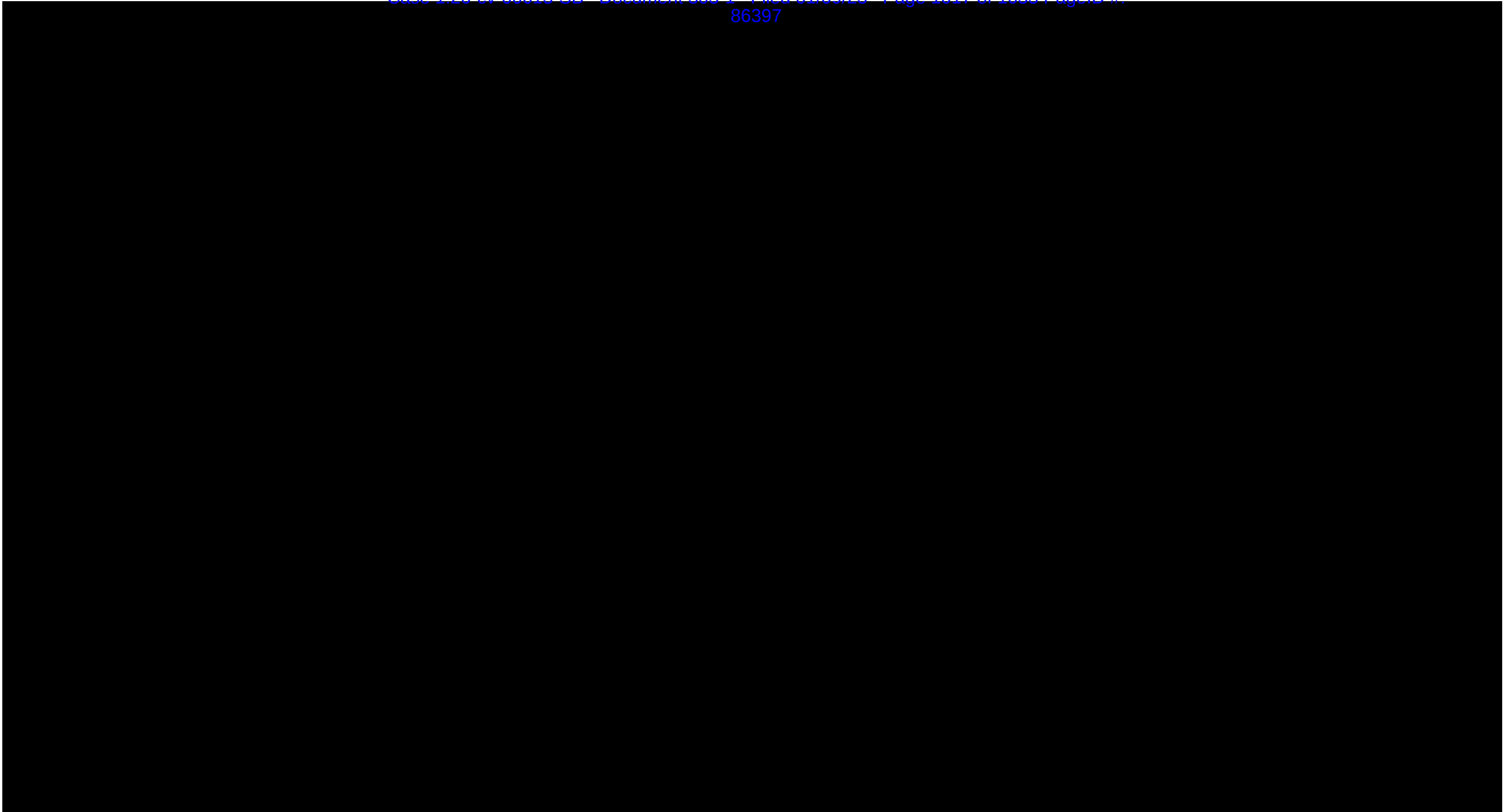


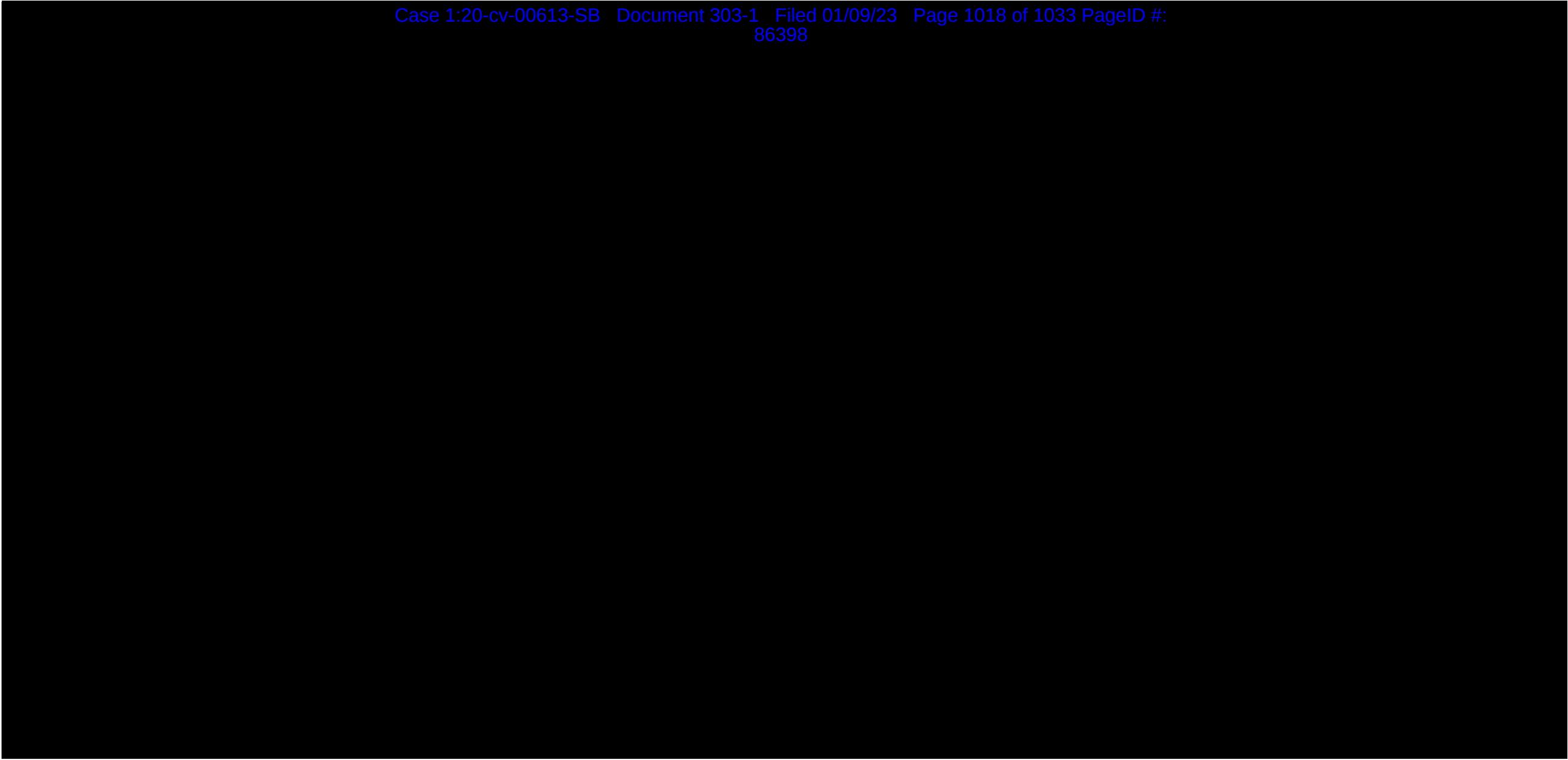


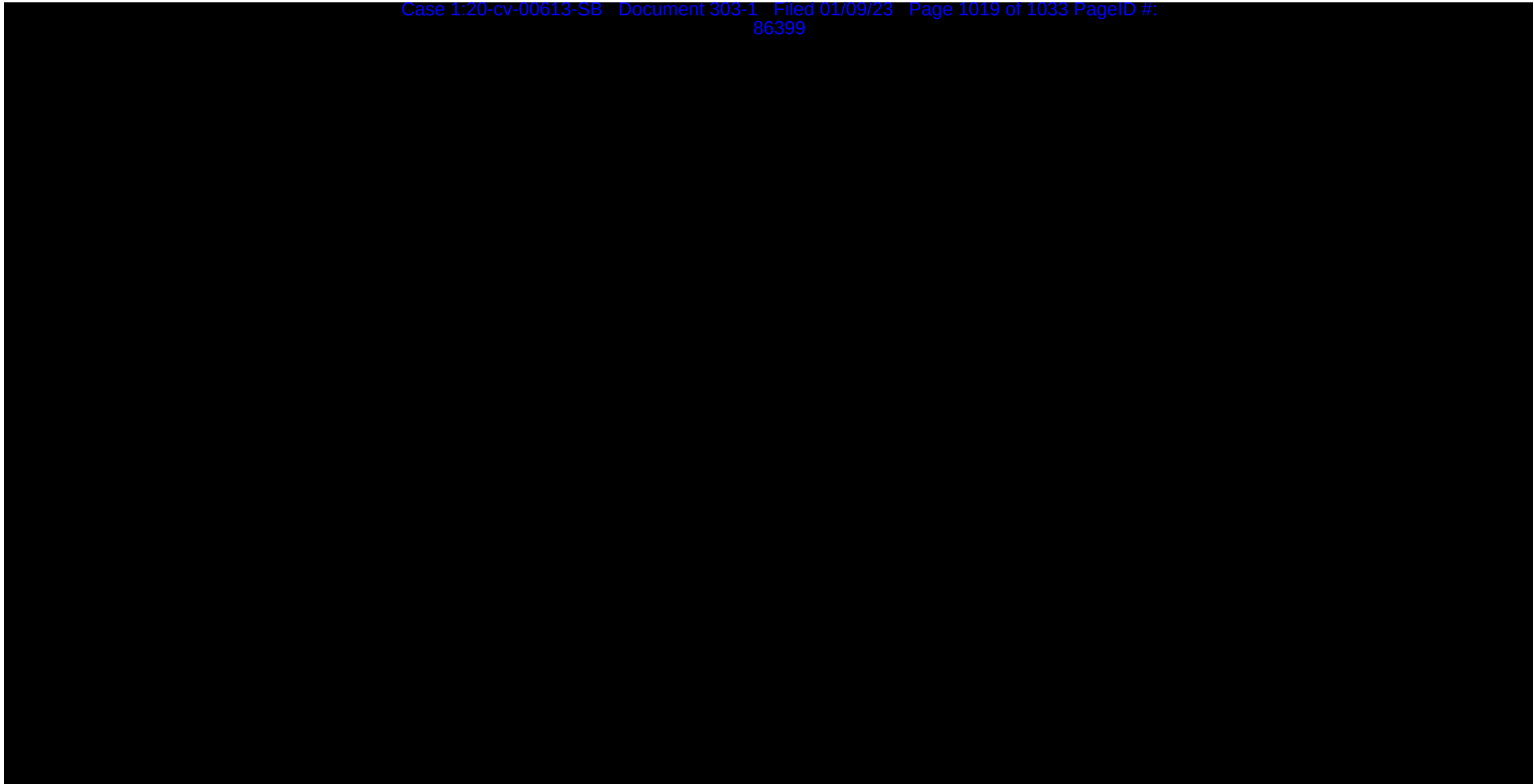


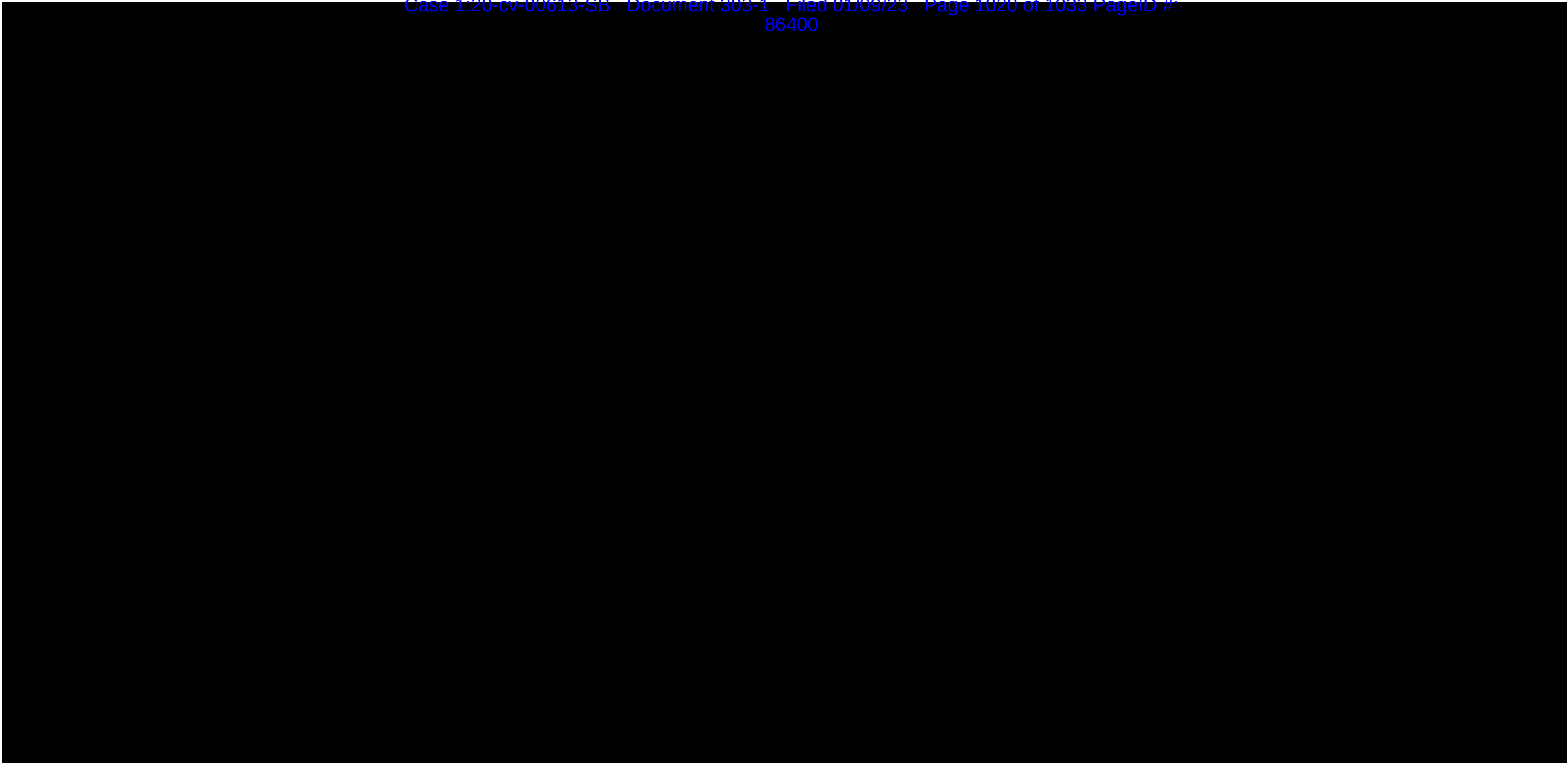


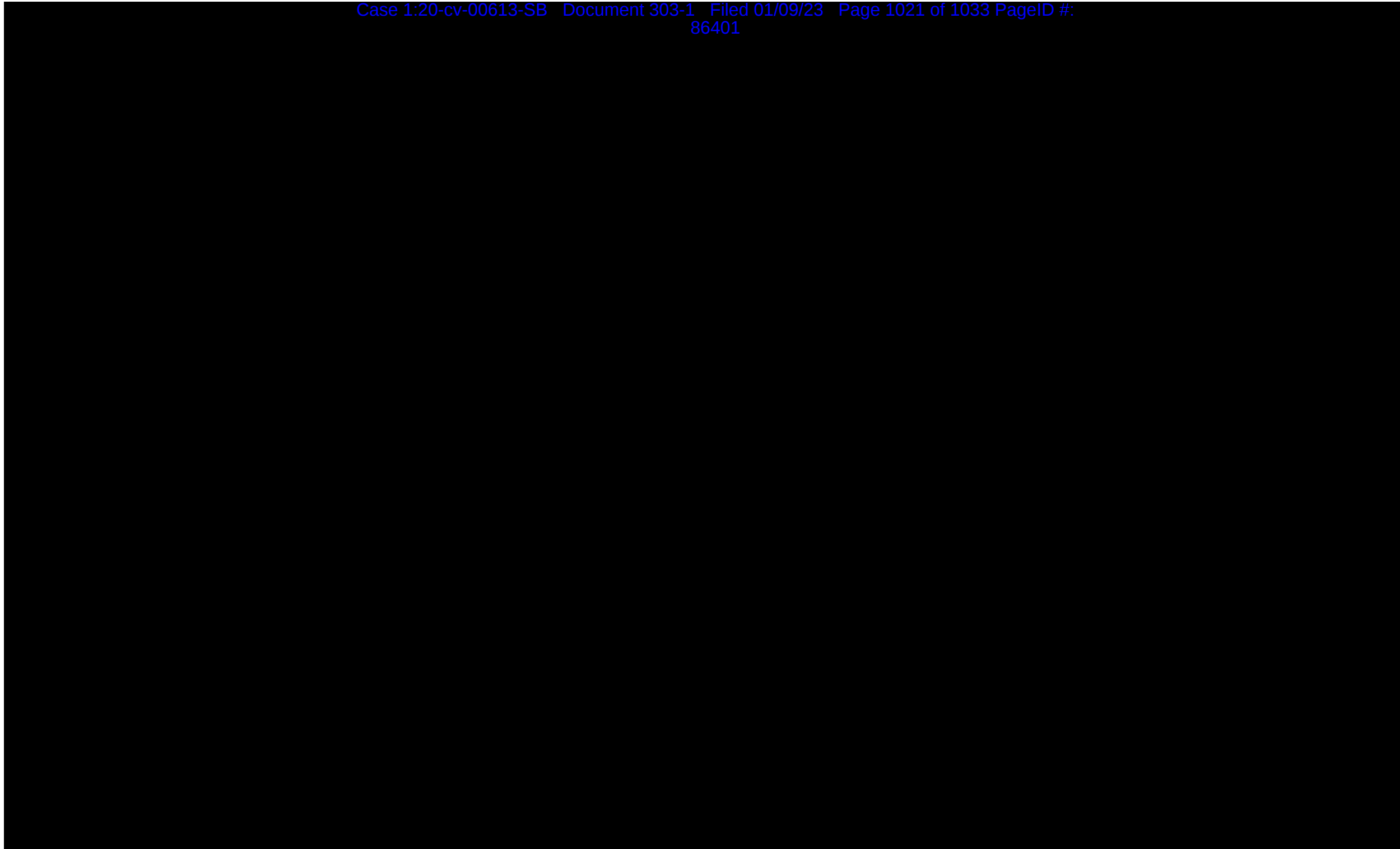


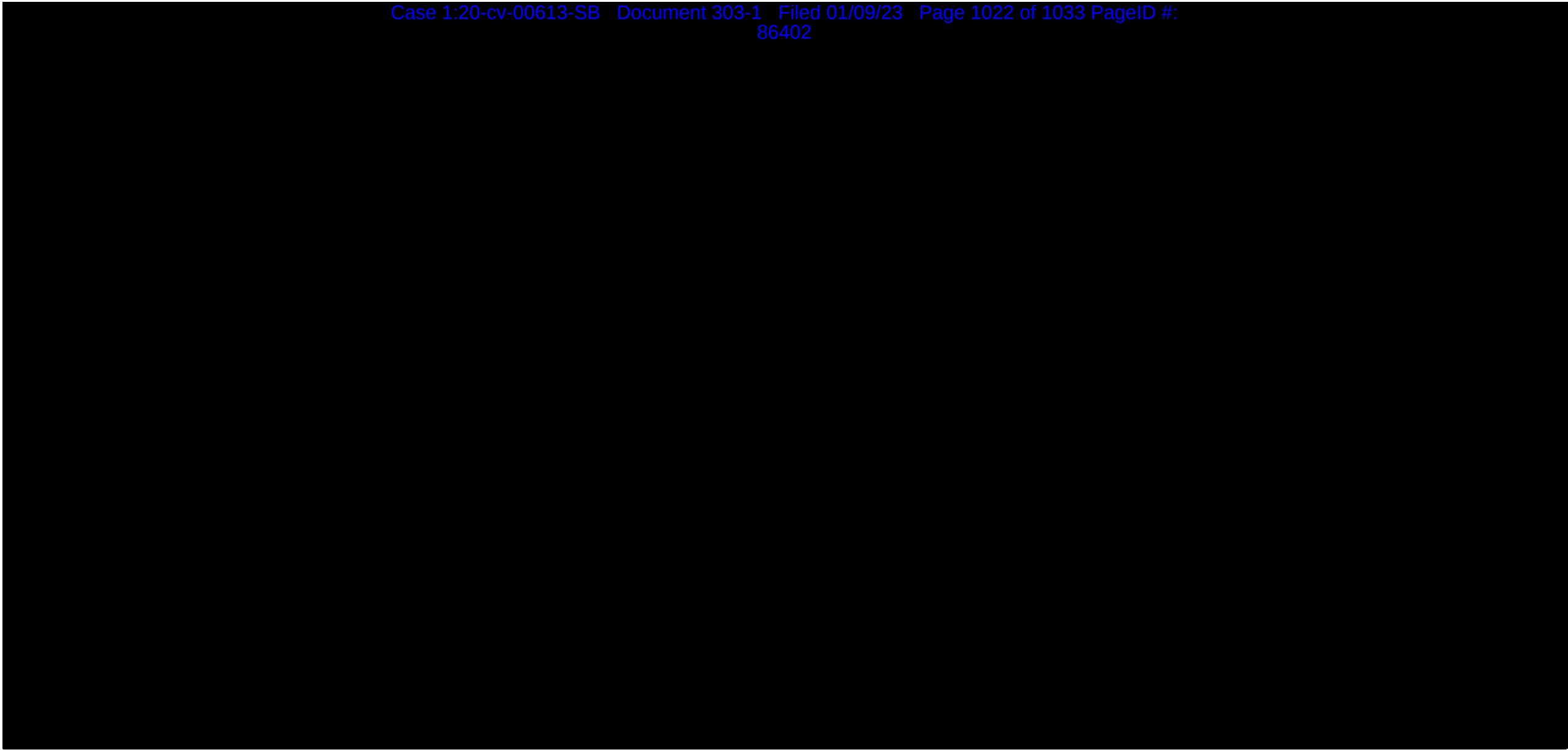


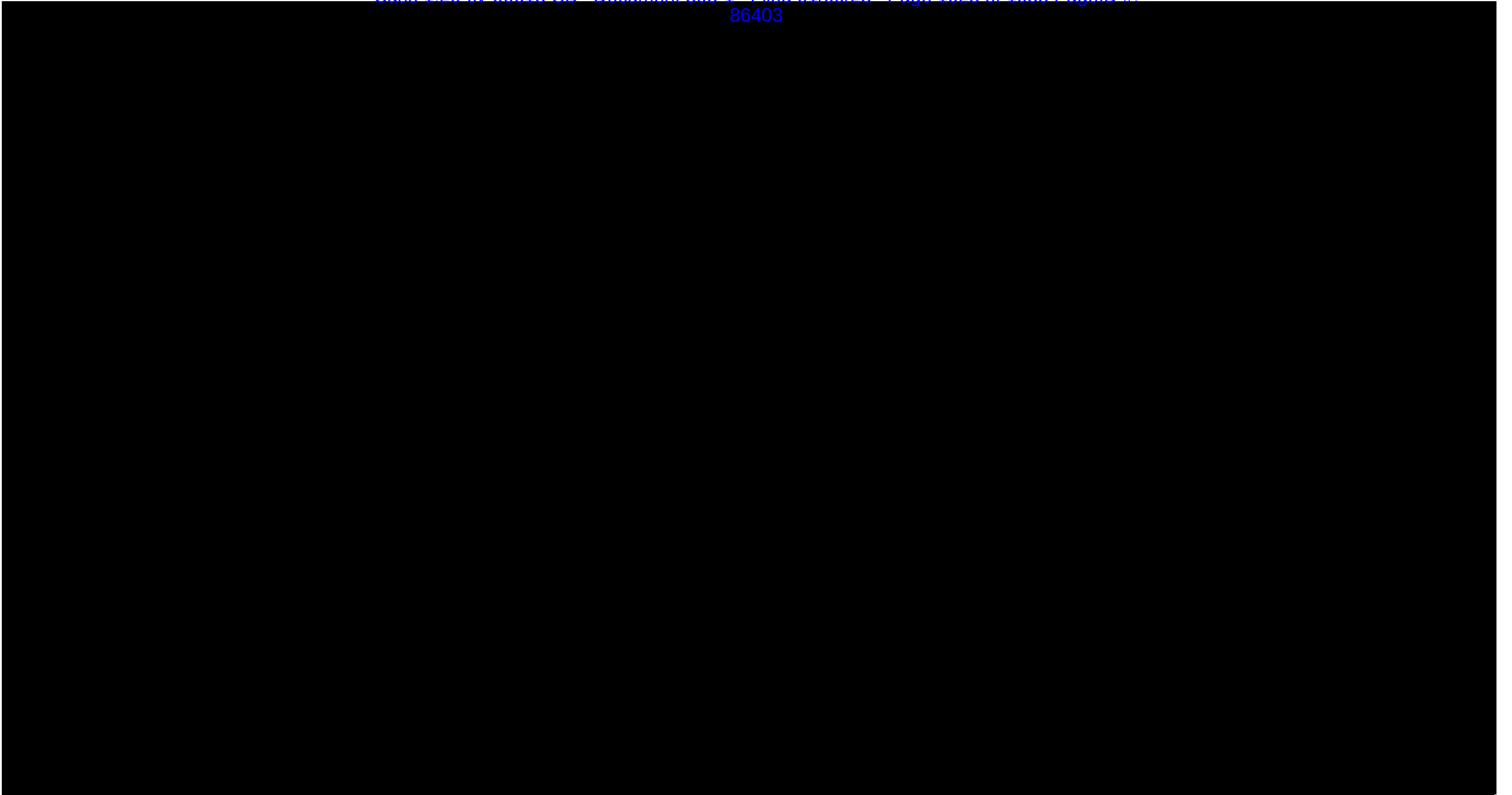


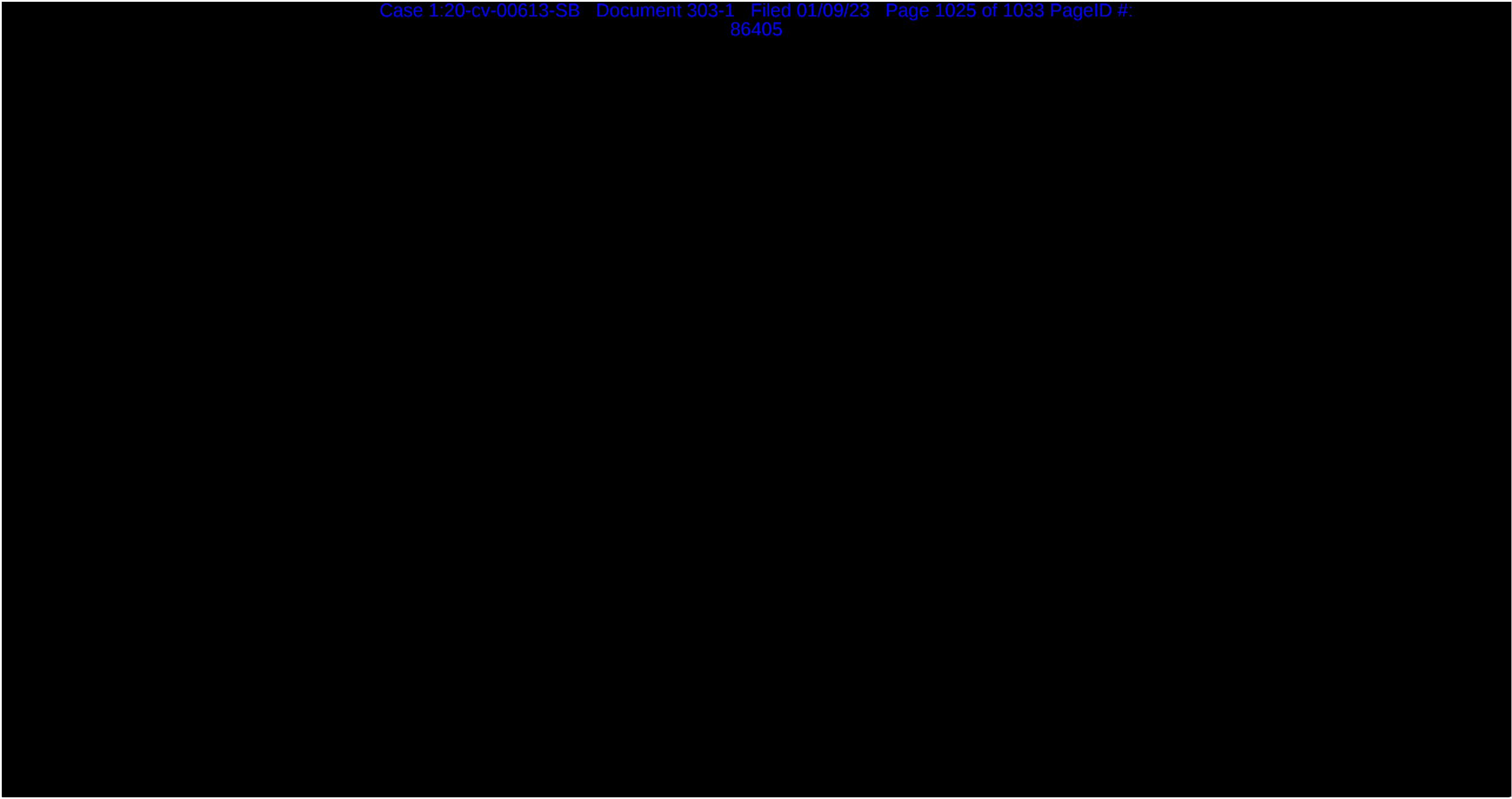


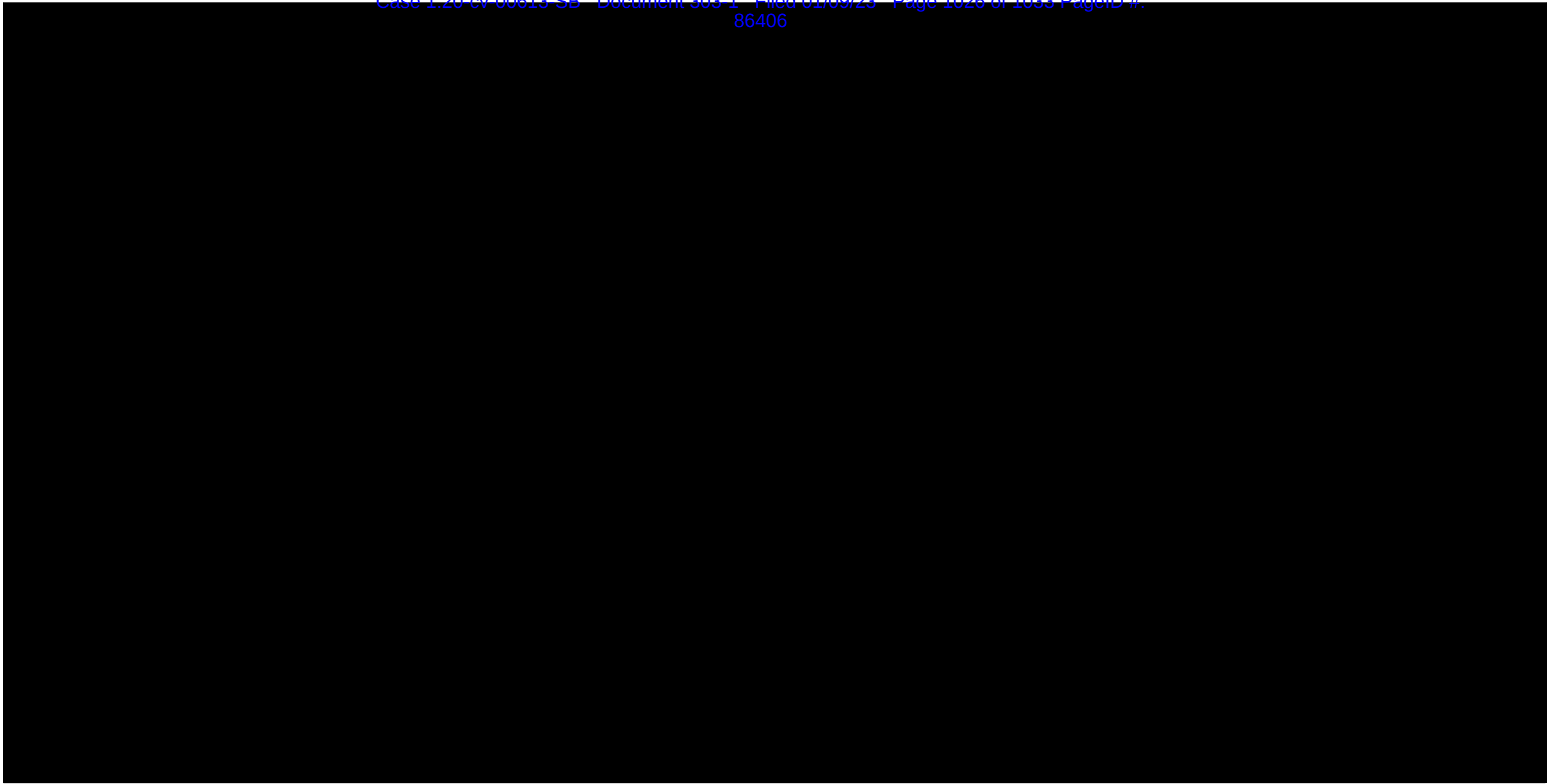


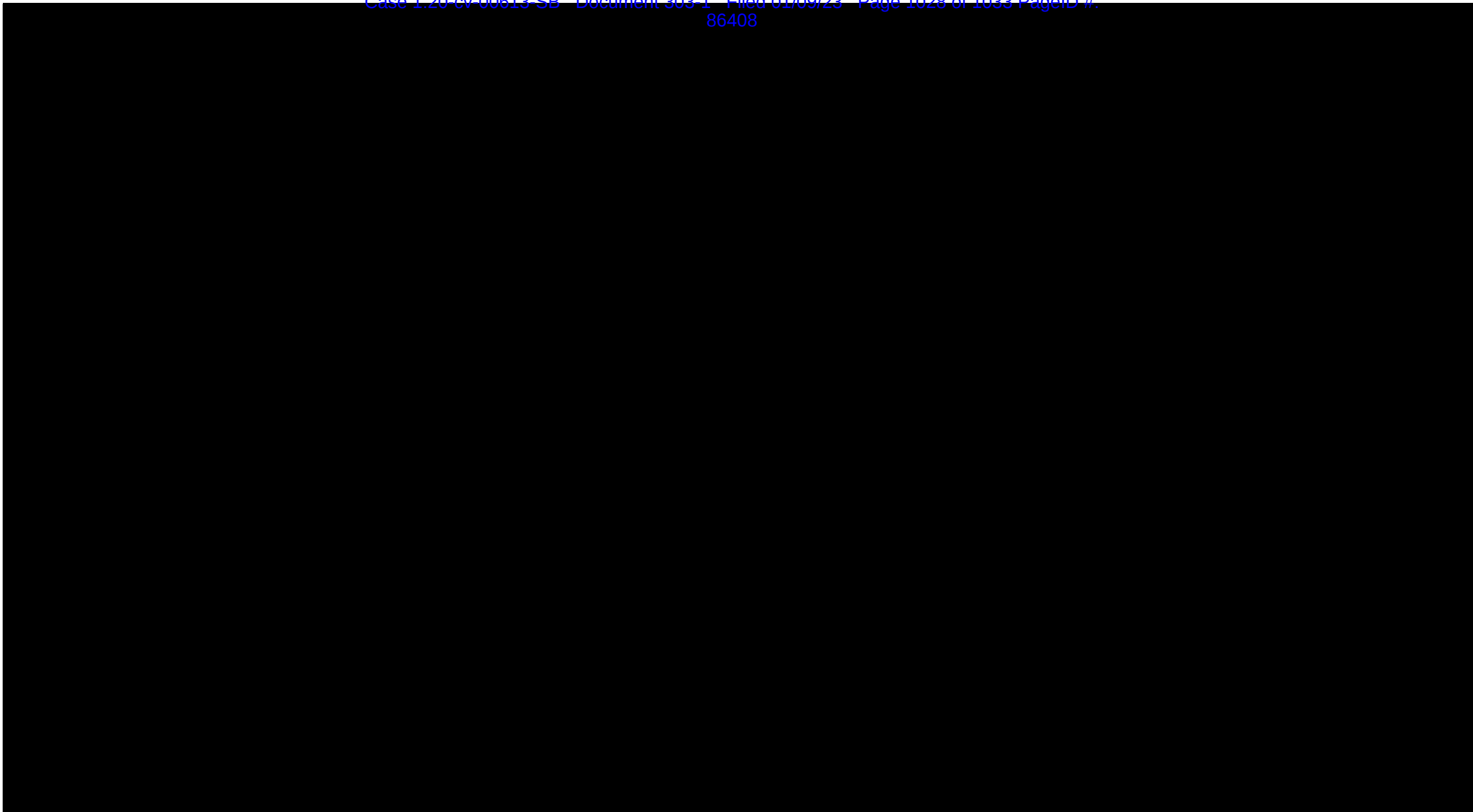












Note: Amounts in USD

EXHIBIT BH

EXHIBIT BI

